



SCOTTISH WIDOWS' FUND.



CLAIMS PAID—
£40,000,000.

FUNDS—
£21,500,000.

ANNUAL REVENUE—
£2,350,000.

THE LARGEST & WEALTHIEST MUTUAL LIFE
ASSURANCE OFFICE IN THE UNITED KINGDOM.

*If you require Life Assurance for Family Purposes or for Business
Purposes apply to this fine old Society for a Prospectus.*

THE WHOLE PROFITS BELONG TO THE MEMBERS.

Prospectus and Quotations for all classes of Life Assurance
or Annuity may be had on application to the

LIVERPOOL OFFICE: 48 Castle Street.

E. V. TOWNSHEND, Resident Secretary.

WILLM. GIBSON & SONS,

17, Water Street, LIVERPOOL.

✱
Works and Stores:
9 SANDHILLS LANE.
Paint Mills:
**WALTER STREET,
STANLEY DOCK.**
✱
Telegrams—"VERMILION."
Telephones—City Office 1070
Works 1812

Oil and Color Merchants

Paint Manufacturers

Ready mixed Paints in tins for export

Suppliers of Deck & Engine Stores

Ship Painters

HENRY WOOD & Co., Limited, **Anchor and Chain Cable Manufacturers.**

ESTABLISHED IN 1780.

*Contractors to the British & Foreign Admiralties,
Trinity Board, Irish Lights, etc.*

*Makers of Stockless and all Types of Anchors,
Mooring Gear, Cables and Crane Chain.*

Works: SALTNEY, nr. CHESTER.

Telephone 800Y SALTNEY.

Telegrams: "WOOD, SALTNEY."

Stores: 32 Queen St., LIVERPOOL.

Telephone 1749 CENTRAL.

Telegrams: "ALBURTUS, LIVERPOOL."

Telegraphic Address: "Woodhey, Liverpool."

Established A.D. 1796.

WILKINSON, HEYWOOD & CLARK

LONDON, **Ltd.**

Contractors to THE ADMIRALTY, WAR OFFICE, INDIA
OFFICE, COLONIAL OFFICE, and BOARD OF TRADE.

**VARNISH, JAPAN & COLOUR
MANUFACTURERS,
OIL MERCHANTS, ETC.**

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Caledonian Works, Bootle,
Telephone
581 Bootle.
LIVERPOOL.

LONDON:

CALEDONIAN WHARF, POPLAR, E.

VARNISH WORKS:

West Drayton, Middlesex.

PAINT & COLOUR WORKS:

Storer's Wharf, Poplar, E.

BRANCHES:

PARIS, MILAN, BRUSSELS.

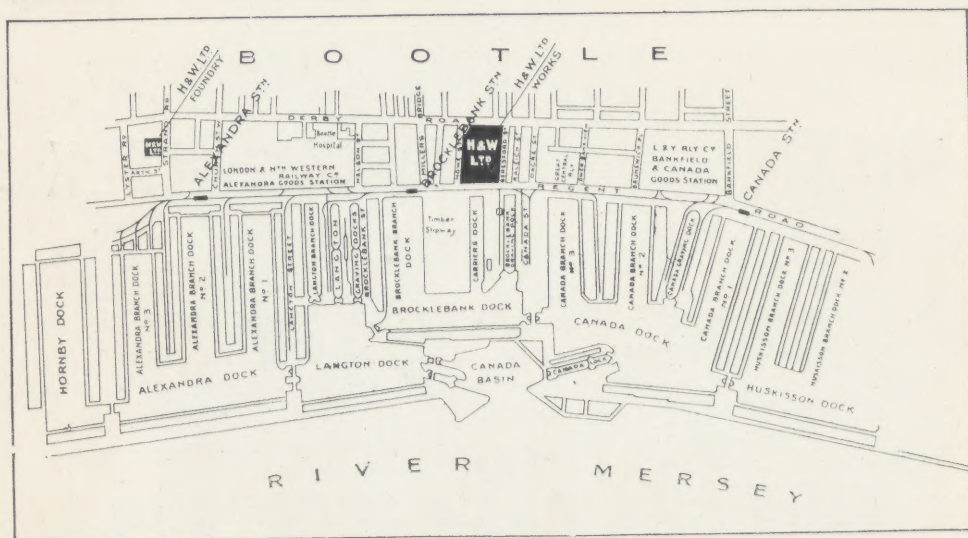
BOMBAY, CALCUTTA, KARACHI.

MELBOURNE, SYDNEY.

HONG-KONG, YOKOHAMA.

MONTREAL, VANCOUVER.

SHANGHAI, BUENOS AYRES.



PART OF LIVERPOOL DOCKS,
Shewing position of Messrs. Harland & Wolff's Works.

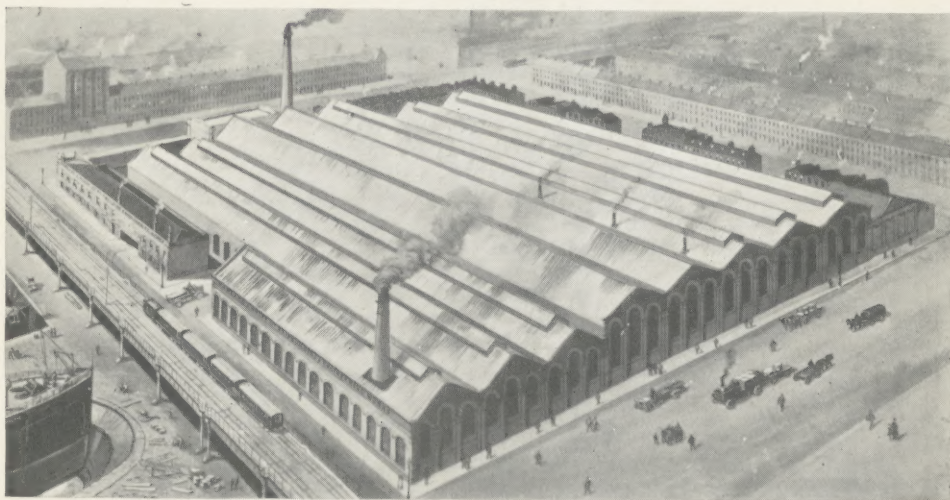
Harland & Wolff Ltd.,

BOOTLE,

LIVERPOOL.

*Also at BELFAST, GLASGOW and
SOUTHAMPTON.*

Telegrams: - - "HARLANDIC, BELFAST," "HARLANDIC, GLASGOW."



Harland & Wolff Ltd.,

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The shops are equipped with the most modern machinery, specially
:: designed for carrying out work with the greatest expedition. ::

**Ship Repairing & Engineering
Works also at Southampton.**

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 " "HARLANDIC, SOUTHAMPTON." "

Telephone No.
1180 BOOTLE.

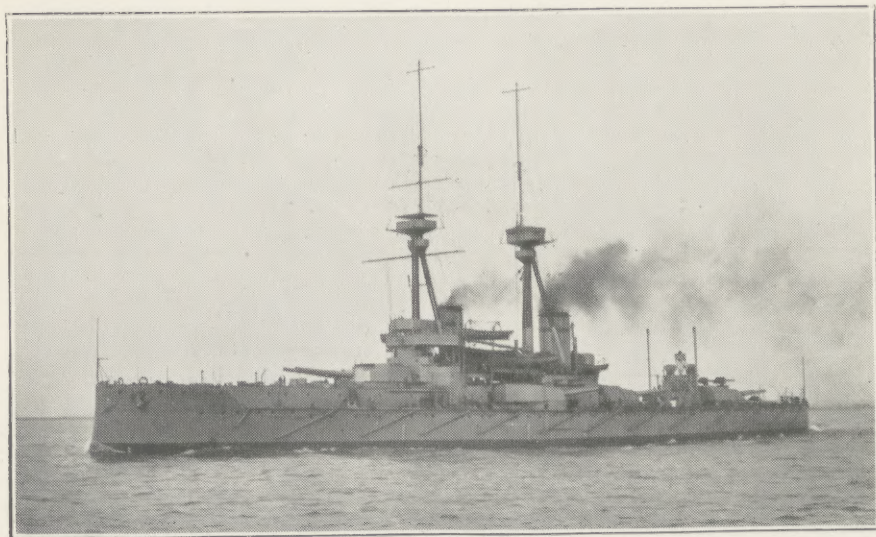
ANDERSON'S

PATENT

Palladeum Bulkhead Insulation

for Engine and Boiler Room Bulkheads
in way of Passenger Accommodation.

H.M.S. VANGUARD.



GILL STEAM & EXHAUST PIPES COVERED WITH MAGNESIA SECTIONAL COVERING BY T. ANDERSON LTD.

MAGNESIA SECTIONAL Coverings for Steam Pipes.
MAGNESIA SLABS for Boilers and Turbines.
CORK SECTIONAL AND SLABS for Cold Storage.

Specify Anderson's Insulation.

T. ANDERSON LIMITED,
53 to 62 DERBY ROAD,
LIVERPOOL.

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Telegrams "Centrifugal."

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ESTABLISHED 1802.

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Paint Manufacturers Manufacturing Chemists

6, 8 & 10 Whitechapel, 7 Church Street,
and 2 & 3 Leigh Street, LIVERPOOL.

Lubricating Oils *for Heavy and Light Machinery,
Spindles, Cycles, etc.*

Burning Oils *Pure Colza and Sperm,
all grades of Petroleum.*

Paints, Varnishes, Disinfectants, Acids, etc., packed for Export.

PETROL & ALL PETROLEUM SPIRITS & MOTOR GREASES.

MEDICINE CHESTS and MEDICAL SURGERIES

for SHIP'S USE, as supplied to the leading Shipping Lines; in mahogany, teak or oak painted, in all sizes, fitted to meet the requirements of the Board of Trade.

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Telephone—701 & 3267 Royal.

Telephones { 5693 Central.
542 Crosby.
766 Central.

Stores: 297 VAUXHALL ROAD and
OLD LEEDS STREET.

GORDONS LIMITED,

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General Contractors and Merchants.

LIGHTER AND BARGE OWNERS.

*Ships' Timber, Dunnage, etc., Supplied. Marine
Boilers, Winches, Steam Launches and Motor Boats
for Sale.*

Sole Agents for IMPROVED OZONATORS for OZONE DISINFECTANT.

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ESTABLISHED 1865.

Telephone
No. 1894, ROYAL.

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PAINT AND COLOUR MANUFACTURERS,
OIL BOILERS AND MERCHANTS,
SHIP PAINTERS, DECORATORS, AND PLUMBERS.

SOLE MANUFACTURERS OF
"TITAN" & "AJAX" COMPOSITIONS
FOR THE BOTTOMS OF STEAMERS & SAILING VESSELS, &
ANTI-CORROSIVE COMPOSITION
FOR HOLDS & IRON DECKS.



Works: Chaloner Street & Jordan Street,
Offices: 37 Chaloner Street,

Liverpool.

Telephone 3904 Bank.

Established 1853.

WALTER MORGAN Ltd.,

Brush and Mat Manufacturers,

33 South John Street, LIVERPOOL,

Works:—26a THOMAS STREET.

Contractors to the Principal Steamship Companies.

Deck and Engine Room Stores always in Stock.

Manufacturers of—

PAINTING BRUSHES.
HOUSEHOLD BRUSHES.

WHITEWASH BRUSHES.
MACHINE BRUSHES.

Every Description for Home or Export.

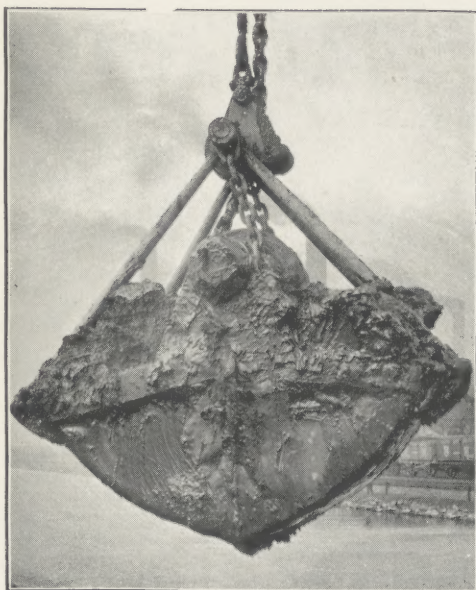
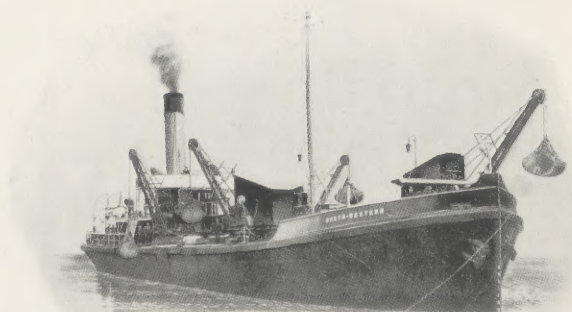
STEEL WIRE BRUSHES A SPECIALITY.

The Priestman System

ADOPTED BY

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GOVERNMENTS.



No space left for water.

THIRTY-SIX
GRAB DREDGERS
AND EXCAVATORS
supplied
to the
BRITISH
GOVERNMENT

PRIESTMAN BROS. Ltd.,
HULL & LONDON.

MUIR, BLEY & FAWCETT,

Biscuit Manufacturers and
:: Flour Merchants. ::

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71, South John Street, Liverpool.

Telegrams: "BISCUITS," LIVERPOOL.

Telephone No. 3628 BANK.

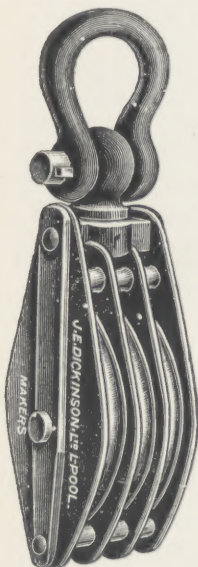
J. E. DICKINSON LIMITED,

Liver Block Works,

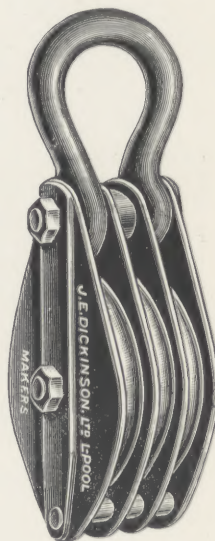
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Manufacturers of

WOOD AND IRON
BLOCKS, GINS, Etc.



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Telephone 3002 Royal.

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FLEXIBLE STEEL-WIRE

Hawsers & Ropes

FLEXIBLE.

DURABLE.

RELIABLE.

Flexible Steel-Wire Ropes

For Cranes, Lifts, Hoists, Salvage Work, &c.

**BLOCKS, PULLEYS, CRAB-WINCHES,
WIRE ROPE CUTTING MACHINES,
AND ALL APPLIANCES FOR WORKING WIRE ROPES.**

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A large stock of Ropes of all sizes is kept at the above Store.

BULLIVANT & CO., Ltd.,

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Works: **MILLWALL, E.**

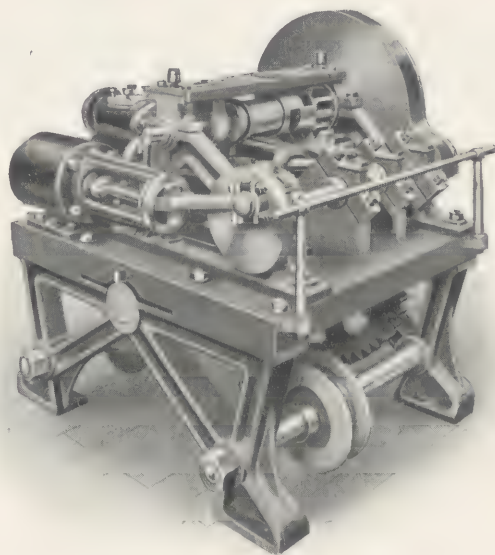
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THE "MOSS" STEERING ENGINE

VERTICAL AND HORIZONTAL TYPES.

The Cylinders
are fixed
and the
ordinary
Slide
Valves,
Eccentrics
and Rods
are
dispensed
with.



Having fewer
working
parts, the
cost of
upkeep is
considerably
less than
that of
any other
Steering
Gear.

SOLE MAKERS—

HIGGINSON & CO.,
ENGINEERS.

Hurst Street, LIVERPOOL.

Telegrams: "HYDRAULIC, LIVERPOOL."

Telephone 4606 Bank.

HIGGINSON'S CARGO BLOCKS.

No. 1 Pattern.



The Best in the Market.
Beware of Imitations.

ALL OUR BLOCKS
BEAR OUR NAME.

No. 3 Pattern.



HIGGINSON & CO.,

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HAYS & HUNTER LTD.,
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Telegrams: "HYDRAULIC, LIVERPOOL."

Telephone 4606 Bank.

GALVANIZING

Telephone:
4241 Bank.

Telegrams:
"BURNELL, LIVERPOOL."

ON ADMIRALTY LIST.

BURNELL & CO., LTD.

The Oldest and Largest **ODD WORK**
GALVANIZERS

— in the North of England. —

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WORKS:

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Enquiries solicited for every kind of Galvanizing Work.

SHIPS' WORK

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REA
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R & J. H. REA (MANAGERS)

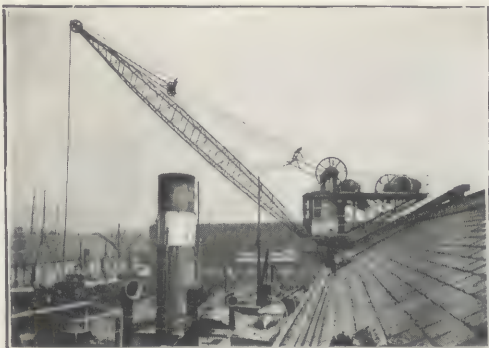
20, WATER STREET, LIVERPOOL.
101, LEADENHALL STREET, LONDON.
13, JAMES STREET, CARDIFF.
CANUTE ROAD, SOUTHAMPTON.
28, BALDWIN STREET, BRISTOL.
EXCHANGE BUILDINGS, NEWCASTLE ON TYNE.

SHIP-OWNERS • TUG-OWNERS • LIGHTERMEN
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PRINCIPAL
OCEAN
STEAMSHIP
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PROPRIETORS
OF THE MOST
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MECHANICAL COALING
PLANT.



Six Electric Roof Cranes at King's Dock No. 2.

CRANES

supplied by us to the

MERSEY DOCKS

and

HARBOUR BOARD.



50-ton Floating Crane "Hercules" See page 38.

**George Russell
and Co., Ltd.**

MOTHERWELL

Builders of all Types and Sizes of

CRANES



40-ton Hydraulic Crane at Canada Graving Dock.



BANK OF LIVERPOOL Limited.

ESTABLISHED 1831. **LIVERPOOL.** ESTABLISHED 1831.

SUBSCRIBED CAPITAL	-	-	-	£11,300,000
PAID-UP CAPITAL	-	-	-	£1,412,500
RESERVE FUND	-	-	-	£850,000

Directors:

JAS. P. REYNOLDS, <i>Chairman.</i>	F. W. CHANCE, <i>Deputy-Chairman.</i>
CHAS. BOOTH.	H. R. ROBERTSON.
OSWALD DOBELL.	W. PEART ROBINSON.
A. EARLE.	H. P. SENHOUSE.
SIR W. B. FORWOOD.	J. A. SLINGSBY.
JAS. F. HAGGAS.	ISAAC H. STORBY.
A. T. NEILSON.	SIR W. H. TATE, <i>Bart.</i>
EDWD. PAUL.	
JOHN RANKIN.	

General Manager—JAMES H. SIMPSON.

Assistant General Manager—ROBT. L. MCGLASHEN.

Manager Head Office—J. J. RITCHIE.

District General Manager—Northern District: F. W. CREWDSON.

London Agents—GLYN, MILLS, CURRIE & Co.; BARCLAY & Co., LTD.; UNION OF LONDON & SMITH'S BANK;
WILLIAMS DEACON'S BANK, LIMITED; and ROBERTS, LUBBOCK & Co.

CURRENT Accounts and Deposit Accounts opened on usual terms.

Drafts issued on, and Credits opened with the Bank's Correspondents in the United Kingdom.

Circular Notes, Letters of Credit, Drafts and Cable Transfers issued on all leading Foreign and Colonial centres; Coupons collected or negotiated, and every other description of Foreign Exchange business undertaken.

Customer's acceptances retired; Investments and Sales of Securities effected, and all kinds of Banking business transacted.

The Bank is prepared to act as Executor or Trustee for Private Persons, and as Trustee, Treasurer, Registrar, or in other fiduciary capacity for Public and Corporate Bodies, Institutions, etc.

Strong Rooms, provided for the custody of Deeds and other property lodged by the customers of the Bank.

The Directors and Officers of the Bank are pledged to secrecy in all matters pertaining to the Bank and its Customers.

THE LONDON CITY and MIDLAND BANK, Ltd.

— ESTABLISHED 1836. —

Directors.

Sir EDWARD H. HOLDEN, Bart., *Chairman and Managing Director.*
WILLIAM GRAHAM BRADSHAW, Esq., London, *Deputy-Chairman.*

The Rt. Hon. LORD AIREDALE, Leeds.
Sir PERCY E. BATES, Bart., Liverpool.
ROBERT CLOVER BEAZLEY, Esq., Liverpool.
Sir WM. BENJAMIN BOWRING, Bart., Liverpool.
JOHN ALEXANDER CHRISTIE, Esq., London.
DAVID DAVIS, Esq., M.P., Llandinam.
FRANK DUDLEY DOCKER, Esq., C.B., Birmingham.

FREDERICK HYNDE FOX, Esq., Liverpool.
H. SIMPSON GEE, Esq., Leicester.
JOHN HOWARD GWYTHER, Esq., London.
ARTHUR T. KEEN, Esq., Birmingham.
The Rt. Hon. LORD PIRRIE, K.P., London.
The Rt. Hon. LORD ROTHERHAM, Manchester.
THOMAS ROYDEN, Esq., Liverpool.

WILLIAM FITZTHOMAS WYLEY, Esq., Coventry.

Joint General Managers: J. M. MADDERS, S. B. MURRAY and F. HYDE.

Secretary: EDWARD J. MORRIS.

Head Office : **5, THREADNEEDLE ST., LONDON, E.C.**

Telegraphic Address—"CIMIDHO, STOCK, LONDON." Telephone—**2481** London Wall.

PAID UP CAPITAL £3,989,237.

RESERVE FUND £3,390,313.

DEPOSITS £83,000,000.

The Bank has Branches and Sub-Branches in London, the suburbs, and throughout the country. It also has Agents in all the principal Cities of the World. Every kind of Banking business is transacted at the Head Office and Branches. Bills, Annuities, Coupons and Dividends are collected in all parts of the United Kingdom, the Colonies, and in Foreign Countries. Purchase and Sale of Stocks and Funds are effected. For the convenience of Customers, monies can be paid in at any of the Branches and advised the same day to their own account. Strong Rooms are provided for the security of Deeds and other property lodged by the Customers of the Bank. Every Officer of the Bank is pledged by a signed Declaration to secrecy as to the business affairs of the Bank and its Customers.

The Foreign Branch Offices—Finch Lane, E.C. and 8, Dale St., Liverpool.

Telegraphic Address—"CINNAFOREX, STOCK, LONDON." Telephones—**2481** London Wall and **5886** Central Liverpool.

ISSUE Currency Drafts on all Cities, Circular Letters of Credit and Circular Notes payable all over the world; also make Mail and Telegraphic Transfers to all Cities. COLLECT Foreign Bills. PURCHASE approved Foreign Bills. ESTABLISH Commercial Credits on behalf of Customers available anywhere against the usual shipping documents. Drafts, &c., may be obtained direct from the Head Office or Branches, which are always ready to give quotations.

The Shipping Department.

Telegraphic Address—"CINNASHIP, STOCK, LONDON." Telephone—**2481** London Wall

Is specially organised to look after Shipowners' Freight Remittances from, and Disbursements to, all parts of the World by mail or cable.



LLOYDS BANK LIMITED

(With which is amalgamated the Liverpool Union Bank Ltd.)

Subscribed Capital (526,084 Shares of £50 each) - - £26,304,200.

LOCAL COMMITTEE FOR LIVERPOOL AND DISTRICT.

HERBERT WHEELER HIND, Esq. *Chairman.*
JOHN HENRY CLAYTON, Esq. ARTHUR E. PATTINSON, Esq. SAMUEL SANDAY, Esq.
JOHN MCKAY, *District Manager.*

LIVERPOOL OFFICE—6, BRUNSWICK STREET.

AND COTTON SUB-OFFICE, COTTON EXCHANGE.
JOHN SMITTON, *Manager.*

EXCHANGE BRANCH—17, TITHEBARN STREET.

THOMAS HOLDER, *Manager.*

OTHER OFFICES IN LIVERPOOL AND DISTRICT.

LIVERPOOL—
BOLD STREET, W. J. SUTTON, *Manager.*
LONDON ROAD, THOS. A. BARON, *Manager.*
PARKS (Lodge Lane), J. FFOLLIOTT MAGRATH, *Manager.*
SEFTON PARK AND MOSSLEY HILL,
THOS. PRIESTLEY, *Manager.*
PRINCE'S ROAD (Upper Stanhope Street),
G. D. NOON, *Manager.*

BIRKENHEAD—West End (Shrewsbury Road).
Do. Charing Cross (Westbourne Road).
Do. JAS. RICHARDSON, *Manager.*
Do. LAIRAGE, J. SMITTON, *Manager.*
HESWALL (Cheshire), HAROLD NEWSON, *Manager.*
DOUGLAS (Isle of Man)
RAMSEY Do. } GEO. R. BARGERY, *Manager.*
PEEL Do.

Also at MANCHESTER, BLACKBURN, CHESTER, &c., &c.

HEAD OFFICE: - - 71, LOMBARD STREET, LONDON, E.C.

CAPITAL PAID UP (Dec. 1912) - £4,208,672
RESERVE FUND do. - 2,900,000
DEPOSIT AND
CURRENT ACCOUNTS do. - 89,832,381

CASH IN HAND, &c. (Dec. 1912) - £24,029,468
BILLS OF EXCHANGE do. - 9,481,148
INVESTMENTS do. - 10,939,333
ADVANCES, &c. do. - 50,347,649

THIS BANK HAS OVER 650 OFFICES IN ENGLAND AND WALES.

PARIS AUXILIARY: - LLOYDS BANK (FRANCE) LIMITED, 19, RUE SCRIBE.

THE MANCHESTER & LIVERPOOL DISTRICT BANKING Co., Ltd.

ESTABLISHED IN 1829.

Paid-up Capital, £1,896,000.

Reserve Fund, £1,680,000.

Deposits, £25,070,072.

Directors:

SIR EDWARD DONNER, BART., <i>Chairman.</i>	JOHN FREDERICK KNOTT, Esq.
EDWARD TOOTAL BROADHURST, Esq., <i>Deputy-Chairman.</i>	RIGHT HON SIR WILLIAM MATHER.
GEORGE BARBOUR, Esq.	JOHN PARKS, Esq.
ANDREW BENNIE, Esq.	SIR EDWARD PARTINGTON.
R. NOTON BARCLAY, Esq.	WILLIAM SMITH, Esq.
RT. HON. JOHN FREDERICK CHEETHAM.	
EDWARD B. DAWSON, Esq.	
MYLES KENNEDY, Esq.	

Managing Directors:

PETER JEFFREY RAMSAY, Esq.	ANGUS A. G. TULLOCH, Esq.
A. C. BREWSTER, Secretary to the Managing Directors.	

Head Office—
SPRING GARDENS,
MANCHESTER.

Manager—
D. DRUMMOND FRASER.
Sub-Manager—
F. E. HILDYARD.

Branch Office—
King Street, Manchester.
Manager—
G. H. GARLICK.



LIVERPOOL OFFICE.

Liverpool Office—
3 & 5, WATER ST.

Manager—
W. JOHNSTON.
Sub-Manager—
W. PRATT.

London Office—
75, CORNHILL, E.C.

Manager—
THOMAS FERGUSSON.
Assistant Manager—
JAMES ALKER.

Lancaster Office—CHURCH STREET.

*Manager—*HERBERT CATTERALL. *Sub-Manager and Inspector—*T. DUCKWORTH.

Preston Office—FISHERGATE.

*Manager—*FRANK ABBATT. *Sub-Manager—*W. R. EASTERBY.

And 201 Branches and Sub-Branches in Lancashire, Cheshire, Staffordshire, Shropshire, Yorkshire, Derbyshire, Cumberland, Westmorland & North Wales.

The Bank, in addition to its own Branches, has Correspondents or Agents in the principal towns of Great Britain and Ireland, to whom moneys may be paid for credit of the Bank's customers. Money is received at any office of the Bank for the credit of customers at another office and the amount credited as on the day of receipt.

CURRENT ACCOUNTS conducted on usual terms. DEPOSIT ACCOUNTS opened with sums of £1 and upwards, bearing interest and repayable on demand.

CIRCULAR LETTERS OF CREDIT AND CIRCULAR NOTES issued for the use of travellers payable in the principal towns of the World.

DRAFTS issued on the London, Liverpool and other offices of the Bank, and on the Bank's Correspondents in the British Isles. Drafts in sterling and in currency are issued on the Bank's Correspondents in the principal cities of the World. MAIL and TELEGRAPHIC TRANSFERS made to all principal cities.

FOREIGN BILLS purchased, collected, or negotiated. Coupons bought or collected. Purchases or sales of British or Foreign Stocks and Securities are effected. Remittances of Bullion and Specie realised.

The Bank is prepared to undertake the office of Executor or Trustee and to incur the responsibilities connected with the administration of Trust Funds.

National Provincial Bank of England

LIMITED.

ESTABLISHED 1833.

CAPITAL - Paid Up	- - -	£3,000,000
Uncalled	- - -	2,300,000
Reserve Liability	- - -	10,600,000
Subscribed Capital	-	<u>£15,900,000</u>

RESERVE FUND (invested in English Government Securities), £2,150,000

NUMBER OF SHAREHOLDERS, 18,293

Head Office—15, BISHOPSGATE, LONDON, E.C.

DIRECTORS.

COLIN FREDK. CAMPBELL, ESQ.
MAURICE OTTO FITZGERALD, ESQ.
WM HENRY NEVILLE GOSCHEN, ESQ.
THE RIGHT HON. LORD INCHCAPE G.C.M.G., K.C.S.I., K.C.I.E.
FRANCIS ALEXANDER JOHNSTON, ESQ.
CLAUDE VILLIERS EMILIUS LAURIE, ESQ.

FRANCIS CHARLES LE MARCHANT, ESQ.
THE RIGHT HON. THE EARL OF LICHFIELD.
GEORGE FORBES MALCOLMSON, ESQ.
SELWYN ROBERT PRYOR, ESQ.
THOS. GEO. ROBINSON, ESQ.
ROBERT WIGRAM, ESQ.

JOINT GENERAL MANAGERS.

THOMAS ESTALL, ESQ. DAVID JOHN HOWARD CUNNICK, ESQ., and FREDERICK ELEY, ESQ.

LIVERPOOL BRANCH—Derby Square, James Street.

A. FRANCIS, Manager.

LIVERPOOL SUB-BRANCHES.

152, London Road. G. A. Brampton, Agent.	58, Whitechapel. F. A. Beaufoy, Agent.
1, Renshaw Street. W. Salisbury-Jones, Agent.	4, Oldhall St. (Exchange Branch) A. Francis, Manager.
Aintree (2, Longmoor Lane, Walton). A. Francis, Manager.	

The National Provincial Bank of England, Limited, having numerous Branches in England and Wales, as well as Agents and Correspondents at home and abroad, affords great facilities to its customers, who may have money transmitted to the credit of their Accounts through any of the Branches free of charge.

At Head Offices and Branches, Deposits are received, Current Accounts opened, and all other Banking business transacted.

Copies of the Annual Report of the Bank, Lists of Branches, Agents, and Correspondents, may be had on application at the Head Office, and at any of the Bank's Branches.

PARR'S BANK LIMITED.

ESTABLISHED 1865.

CAPITAL.			
Authorised	=	=	£12,500,000
Paid up	=	=	£2,204,780
Issued	=	=	£11,023,900
Reserve Fund	=	=	£2,000,000



LIVERPOOL CITY OFFICE.

Directors :

CECIL F. PARR, Esq. <i>Chairman.</i>	H. CARY G. BATTEN, Esq. ROBERT E. DICKINSON, Esq.	THE HON. SIR CHAS. W. FREMANTLE, K.C.B. JOHN R. P. GOODDEN, Esq.	EDWARD W. NIX, Esq. A. ALLAN SHAND, Esq.
ARTHUR J. FRASER, Esq. <i>Deputy-Chairman.</i>	N. FFARINGTON ECKERSLEY, Esq.	ALFRED HEWLETT, Esq. HUGH B. MUIR, Esq.	THE HON. ARTHUR STANLEY, M.P. ALFRED MORRISON, Esq.
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Director and General Manager: R. W. WHALLEY.

Deputy General Manager: JOHN STEWART.

Assistant General Manager: JOHN RAF.

Liverpool Manager: J. C. ROBERTSON.

Liverpool Sub-Manager: WM. D. HUGHES.

The Bank has Branches and Sub-Branches in London and Suburbs and throughout the Country and Correspondents in the chief Towns and Cities of the World.

Current Accounts kept, and Deposit Accounts bearing interest, in accordance with the usual practice in London and the Provinces respectively, and every description of Banking business transacted for Customers residing at home or abroad.

HEAD OFFICE:—BARTHOLOMEW LANE, LONDON, E.C.

THE UNION BANK OF MANCHESTER, LIMITED

Established 2nd May, 1836.

NOMINAL CAPITAL	-	-	-	£2,500,000.
Issued	-	£1,250,000	in 50,000 Shares of £25 each.	
		Paid-up	-	£550,000.
RESERVE FUND	-	-	-	£340,000.

Board of Directors.

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General Manager : P. FORRESTER.

Head Office : YORK STREET, MANCHESTER.

Liverpool Office : - - 45, CASTLE STREET.

Joint Managers : R. W. WALLACE and W. JOHNSON.

Branches in Manchester, Salford, and their Suburbs.

ALL SAINTS—137 Oxford Rd.	PENDLEBURY	SALFORD CATTLE MARKET
ARDWICK—8 Ardwick Green	PICCADILLY	SALFORD DOCKS
BROUGHTON BRIDGE	PRESTWICH	SEEDLEY & WEASTE—138
CAMPFIELD—314 Deansgate	ROYAL EXCHANGE—11 St.	Eccles New Road
CHEETHAM HILL	Mary's Gate (near the	STRANGEWAYS
CORN EXCHANGE	Royal Exchange)	SWAN STREET
DEANS GATE—166 Deansgate	ST. PETER'S—2 Oxford St.	WEST GORTON
IRLAM'S-O'-TH'-HEIGHT	SALFORD	WHITWORTH STREET

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ALDERLEY EDGE	HEATLEY & WARBURTON	RADCLIFFE
ALTRINCHAM & BOWDON	HEAVILEY	RAWTENSTALL
ANSDALL & FAIRHAVEN	HEYWOOD	REDDISH
ASHTON-IN-MAKERFIELD	HOLLINWOOD	ROCHDALE
ASHTON-UNDER-LYNE	HOLMES CHAPEL	ROMILEY
ASTLEY	HORWICH	ROYTON
AUDLEM	KNUTSFORD	ST. ANNES-ON-SEA
BLACKBURN	LEES	SHAW
BLACKLEY	LEIGH	SOUTHPORT
BOLTON	LITTLEBOROUGH	STOCKPORT
BOOTHSTOWN	LYMM	STONECLOUGH
BRIERFIELD	MIDDLETON	STYAL
BROOKLANDS	MIDDLEWICH	SUMMIT
BURNLEY	MOSSLEY	TYLDESLEY
Do. COLNE ROAD	NANTWICH	WARRINGTON
BURY	NELSON	WHITWORTH
CHURCH	NORDEN	WIGAN
COLNE	NORTHWICH	WILMSLOW
DIDSBURY	Do. STATION ROAD	WINSFORD
FARNWORTH	OLDHAM	WITHINGTON
GARSTON	PATRICROFT	WOODLEY

London Agents : GLYN, MILLS, CURRIE & Co.

Comprehensive Arrangements exist for the transaction of Business at Home & Abroad.

All Kinds of Foreign Money Exchanged.

The London and Provincial Bank Limited.

SUBSCRIBED CAPITAL	- -	£2,000,000
PAID UP CAPITAL	- - -	£1,000,000
RESERVE FUND	- - -	£2,000,000

HEAD OFFICE: - 3, Bank Buildings, Lothbury, LONDON, E.C.

Directors:

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JOHN WOODROW CROSS, Esq.	RICHARD COBDEN MICHELL, Esq.
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ALFRED GILBEY, Esq.	SIR JOSEPH SAVORY, BART.

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JESSE LAMBLY THOMAS, Esq. WILLIAM CARRUTHERS, Esq.

Secretary: WILLIAM JOHN STOKOE, Esq.

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DRAWING ACCOUNTS are opened upon the terms usually adopted by other Bankers.

Customers of Branches of the Bank can, by arrangement, domicile their acceptances at Messrs. Glyn & Co., or at the Head Office of the Bank.

Moneys can be paid in at the Head Office, or any of the Branches of the Bank for Customers' credit at any other Office, and arrangements can also be made for their cheques to be cashed. For Customers having business connections in Towns where the Bank has not a Branch, similar arrangements can be made with other Bankers.

DEPOSIT ACCOUNTS.—Deposits are received from Customers and others, subject to short notice of withdrawal, and interest allowed thereon at such rates and for such periods as may be agreed upon, reference being had to the state of the money market. Deposit Books are issued when required; these are specially convenient for small Deposits.

THE BANK effects purchases and sales of British and Foreign Funds, Stocks, Shares and Securities—receives Dividends, &c. Customers may have their Dividends made payable to the Bank for the credit of their accounts.

THE BANK takes care of Customers' Securities, issuing a printed form of receipt for the same.

THE BANK is prepared to act in any of the following capacities—Executor of a Will, Trustee of a Will, Executor and Trustee of a Will, Trustee of a Marriage or other Settlement, Custodian Trustee of a Will or Settlement, Trustee of a Trust Deed securing Debentures or Debenture Stock, Trustee for any Public Authority, Institution or Society.

Drafts, Circular Notes, and Letters of Credit are issued or obtained for Customers, and Mail and Telegraphic Transfers are effected, and Foreign Drafts, Coupons, &c., are collected.

THE BANK also transacts every other description of Banking Business.

Every Officer of the Bank is required to sign a Declaration of Secrecy as to the transactions of any of its Customers.

LIVERPOOL BRANCH: - 42 CASTLE STREET.

W. SHANKLAND, Manager.

United Counties Bank Ltd.

(ESTABLISHED 1836.)

Head Office : 63 COLMORE ROW, BIRMINGHAM.

Nominal Capital	-	-	-	-	£10,000,000
Subscribed Capital	-	-	-	-	£5,966,660
Paid-up Capital	-	-	-	-	£1,193,332
Reserve Fund	-	-	-	-	£765,000

Board of Directors.

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 SIR GILBERT H. CLAUGHTON, Bart., Deputy Chairman.
 SIR JOSEPH BRIGHT. HENRY S. CHILDE, Esq.
 SIR JOHN C. HORSFALL, Bart. ERNEST C. KEAY, Esq.
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H. J. ROPER, General Manager.

R. BROCKLEY, Secretary.

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Birmingham	Bristol	Leeds	Potteries (11 Offices)
Barrow-in-Furness		Liverpool	Sheffield
Bradford	Dudley	Nottingham	Wakefield
Wolverhampton, &c., &c.			

Current and Deposit Accounts are opened on the usual Banking terms. Moneys may be paid in at any Branch of the Bank, and at the Branches of the Bank's numerous Agents. A Special Foreign Department has been established, and particular attention is paid to this class of business. Drafts are issued on all the principal cities of the world, and can be obtained through any Branch of the Bank. Circular Notes and Letters of Credit are issued or obtained for the use of Customers travelling in any part of the world. The Bank Collects and Purchases Foreign Bills and Establishes Commercial Credits abroad on behalf of Customers against the usual shipping documents. Strong Rooms are provided for the security of Deeds and other property lodged for Safe Custody. The Officers of the Bank are bound to secrecy.

Every description of Banking Business transacted.

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 104, LONDON ROAD.
 21, ALLERTON ROAD.
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THOMAS COOPER, MANAGER.

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MERCHANDISE COLLECTED, WAREHOUSED AND FORWARDED.

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and Distributor's Warehouse, Ordsall Lane.
LONDON, 95, Leadenhall Street, E.C.
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Contractors.
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HARRISON LINE.



FLEET.

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s.s. ARCHITECT	5421	s.s. COMMODORE	5858	s.s. INKONKA	3429	s.s. PATRICIAN	7473
s.s. ARTIST	3569	s.s. COUNSELLOR	4957	s.s. INKOSI	3575	s.s. POLITICIAN	7228
s.s. AUTHOR	3490	s.s. CRAFTSMAN	6195	s.s. INSIZWA	2983	s.s. PROFESSOR	3580
s.s. BARRISTER	4750	s.s. CUSTODIAN	9214	s.s. INTABA	4831	s.s. SCULPTOR	3846
s.s. BENEFACTOR	5511	s.s. DICTATOR	4116	s.s. INTOMBI	3884	s.s. SENATOR	4688
s.s. BOTANIST	7687	s.s. DIPLOMAT	7614	s.s. INVENTOR	7679	s.s. STATESMAN	6152
s.s. CANDIDATE	5858	s.s. DIRECTOR	4930	s.s. JARNAC	617	s.s. STUDENT	3579
s.s. CENTURION	5945	s.s. ENGINEER	5882	s.s. LOGICIAN	4878	s.s. TACTICIAN	7280
s.s. CHANCELLOR	4586	s.s. EXPLORER	7608	s.s. MAGICIAN	5065	s.s. TRAVELLER	3041
s.s. CIVILIAN	7871	s.s. GLADIATOR	3359	s.s. MATADOR	3400	s.s. WANDERER	4085
s.s. COGNAC	813	s.s. HISTORIAN	6857	s.s. MECHANICIAN	9043	s.s. WARRIOR	3491
s.s. COLLEGIAN	7236	s.s. HUNTSMAN	7459	s.s. MERCHANT	3682	s.s. WAYFARER	9599
s.s. COLONIAL	4956	s.s. INANDA	4089	s.s. MUSICIAN	4763		
s.s. COMEDIAN	4889	s.s. INGELI	2928	s.s. ORATOR	3563		

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Regular Line of Steamers from MANCHESTER and LIVERPOOL to Baltic Ports and vice versa. THROUGH RATES quoted to and from all Baltic Ports and Inland Towns.

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Stettin	Libau	Fredrikshald
Danzig	Helsingfors	Moss
Newfairwater	Wiborg	Skien (Ekerod)
Stockholm	Kotka	Porsgrund
Norrkoping	Rafso	Holmestrand
Sundsvall	Hango	Stavanger
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ALFRED HOLT & CO.

THE OCEAN STEAM SHIP COMPANY, LTD.
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CARGO SERVICES TO

Penang, Singapore, Hong Kong, Shanghai and Japan	WEEKLY
Port Swettenham	FORTNIGHTLY
Manila, Vancouver, Victoria, Tacoma and Seattle	...	...	...	...	FOUR-WEEKLY
Jeddah, Padang and Java Ports	...	...	...	...	FORTNIGHTLY
Taku and Tientsin	...	(During the Open Season, January to October Sailings)			FOUR-WEEKLY
Dalni and Chemulpo	...	...	...	...	FOUR-WEEKLY
Hankow	...	(During the High River Season, March to July Sailings)			FOUR-WEEKLY
Australia	...	...	...	...	THREE-WEEKLY
Western Australia (with Transhipment at Singapore)	...	...	...	...	FORTNIGHTLY

A Service to any other Port in the East can be arranged when suitable inducement offers.

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14,250.

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These Ships are fitted with Wireless, Laundry, Nursery, Library, etc., and accommodate from 250 to 350 First-Class Saloon Passengers, who are the only class of passengers carried. Tickets at moderate rates, are issued from Glasgow, Liverpool and London, *via* Liverpool to Adelaide, Melbourne, Sydney, Brisbane, Western Australia, Queensland, Tasmania and New Zealand. Fares from London include First-Class Rail Fare from Euston to Liverpool. The route taken is *via* Las Palmas and Capetown.

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TUESDAY and SATURDAY,
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SATURDAY.
Calling at QUEENSTOWN and/or
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(Summer).

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Passengers embark at Southampton.
All Steamers call at PLYMOUTH on
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HAVRE.....23, Quai d'Orleans
PARIS 37 Boulevard des Capucines

BERLIN...57, Unter den Linden
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"CLAN BUCHANAN"	5212	"CLAN MACBETH"	4600	"CLAN MACNAB"	4675
"CLAN CAMERON"	3595	"CLAN MACBRIDE"	4985	"CLAN MACNAUGHTON"	4985
"CLAN CHATTAN"	3938	"CLAN MACCORQUODALE"	5000	"CLAN MACNEIL"	3939
"CLAN CHISHOLM"	2647	"CLAN MACDONALD"	4839	"CLAN MACPHEE"	5177
"CLAN COLQUHOUN"	5856	"CLAN MACDOUGALL"	4710	"CLAN MACPHERSON"	4778
"CLAN CUMMING"	4808	"CLAN MACEWEN"	5140	"CLAN MACQUARRIE"	5600
"CLAN DAVIDSON"	5053	"CLAN MACFADYEN"	2815	"CLAN MACRAE"	5058
"CLAN FARQUHAR"	6858	"CLAN MACFARLANE"	4823	"CLAN MACTAVISH"	5815
"CLAN FERGUSON"	4808	"CLAN MACGILLIVRAY"	5022	"CLAN MATHESON"	4775
"CLAN FORBES"	3946	"CLAN MACINNES"	3755	"CLAN MENZIES"	2669
"CLAN FRASER"	3588	"CLAN MACINTOSH"	4774	"CLAN MURRAY"	4835
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s.s. "BRAEMAR" - - -	3,601	s.s. "LOTHIAN" - - -	4,959
s.s. "DEN OF AIRLIE" - - -	5,865	s.s. "LOVAT" - - -	6,102
s.s. "DEN OF OGIL" - - -	5,860	s.s. "MONTROSE" - - -	4,452
s.s. "ERROLL" - - -	4,457	s.s. "PATHAN" - - -	4,956
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s.s. "INKULA,"	8,650	s.s. "IKALIS,"	7,140
s.s. "INDIANOLA,"	8,450	s.s. "IKARIA,"	7,120
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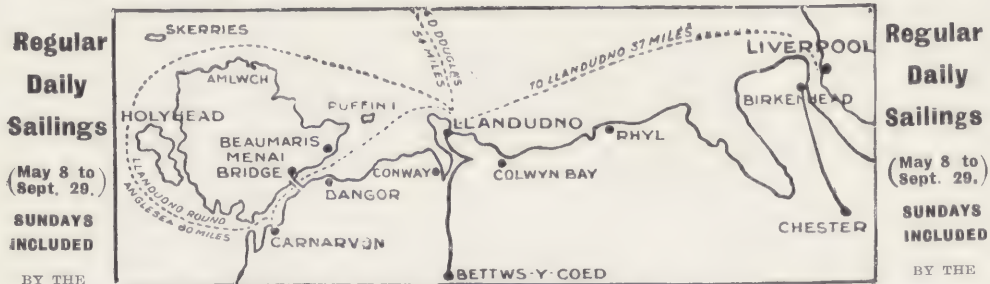
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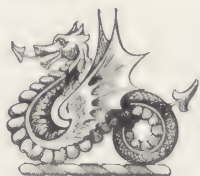
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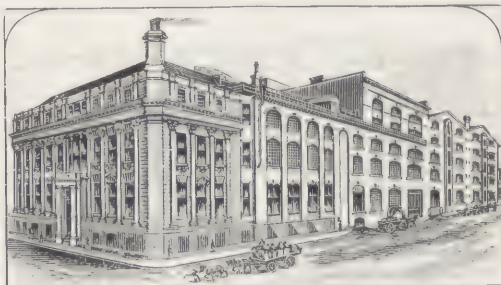
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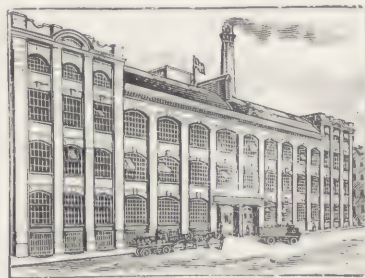
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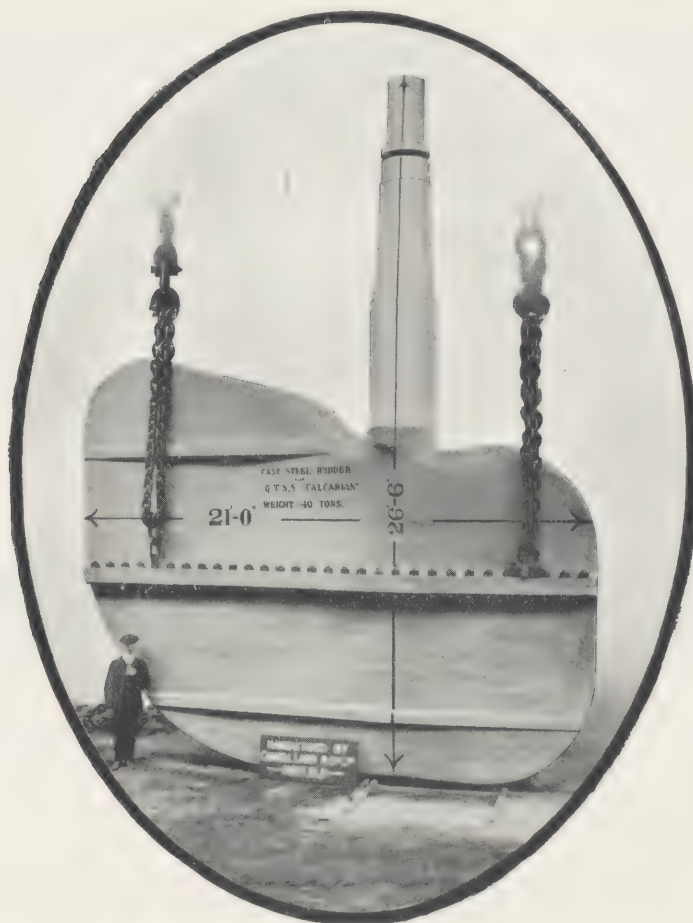
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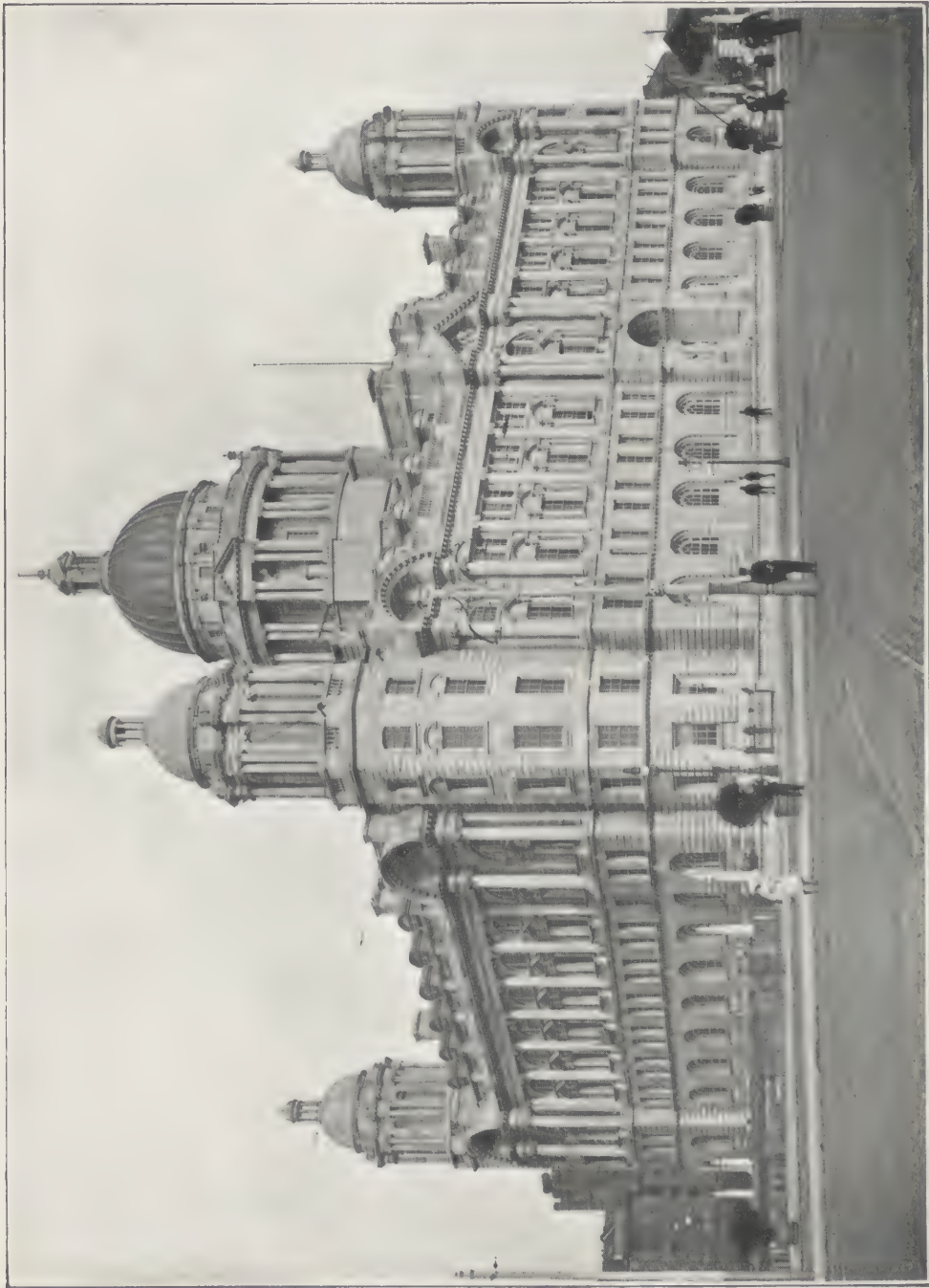
MERSEY DOCKS AND HARBOUR BOARD,

ALFRED CHANDLER, General Manager,

Dock Office, LIVERPOOL.



THE PORT OF LIVERPOOL:
ITS RISE AND PROGRESS.



OFFICES OF THE MERSEY DOCKS AND HARBOUR BOARD.

SECOND EDITION.

THE PORT OF LIVERPOOL:

Its Rise and Progress.



Published under the sanction of the Mersey Docks and Harbour Board by
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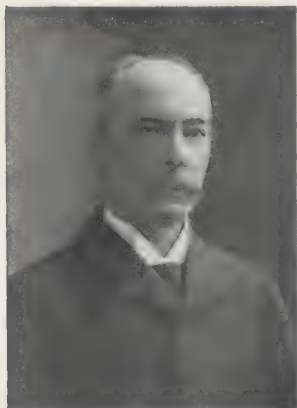
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Chairman of the Mersey Docks and Harbour Board.

MERSEY DOCKS AND HARBOUR BOARD.

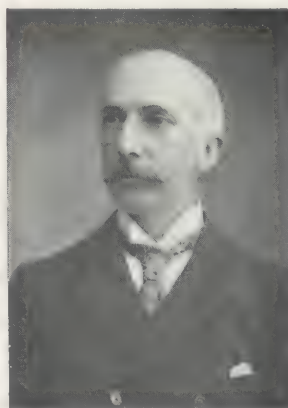
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MEMBERS OF THE DOCKS AND HARBOUR BOARD.



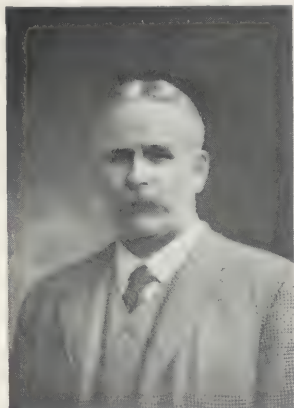
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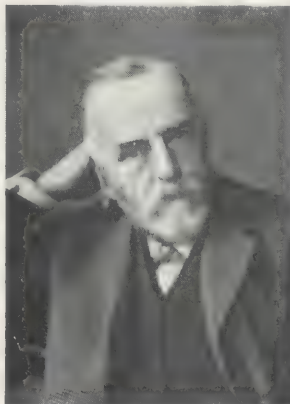
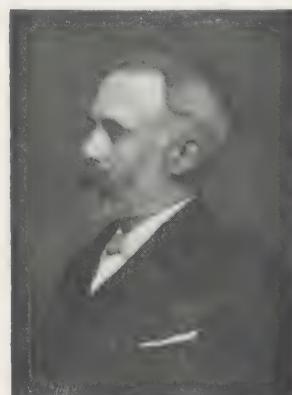


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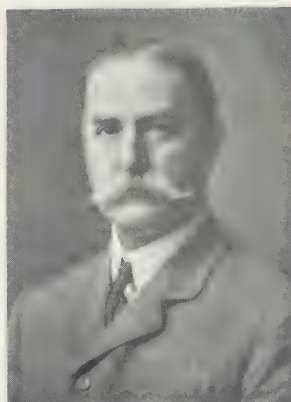
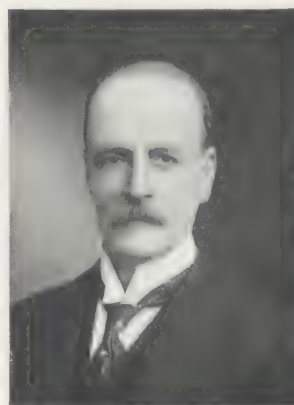


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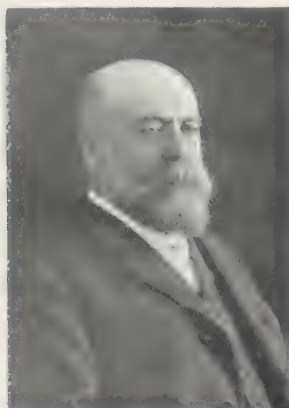
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Assistant to the General Manager, Charles Dow.
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Principal Receiver of Rates and Dues, &c., J. Halsall.
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Accountant to the Audit Commissioners, W. Reid.
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Principal Examiner, C. D. K. Southwell.

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Assistant Harbour Masters.—William H. Blundell, Robert Parry, (Office, Dock Office.)

DOCK MASTERS.

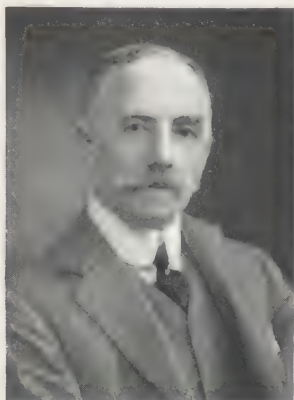
Hornby, Alexandra and Branch Docks, Langton, Langton Branch and Graving Docks, and the working of the Canada Basin during tide time.—James M. Chittick (Office, Langton Dock.)

Canada, Canada Branch Nos. 1, 2, and 3, and Canada and Brocklebank Graving Docks; Brocklebank Dock and Branch and Carriers' Docks.—Thomas R. Applegate (Office, Canada Pierhead).

Huskisson and Huskisson Branch Docks, and Sandon Dock and Sandon Half-Tide Dock, Wellington and Bramley-Moore Docks.—A. P. Hurst (Office, West Side, South Entrance, Huskisson Dock).

Nelson, Salisbury, Collingwood, Stanley, Clarence, Clarence Half-Tide, and Trafalgar Docks (excluding the west side of the Trafalgar Dock) and Clarence Graving Docks and Gridiron.—George Stewart (Office, Salisbury Pier).

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Charles E. Paynter, Esq.



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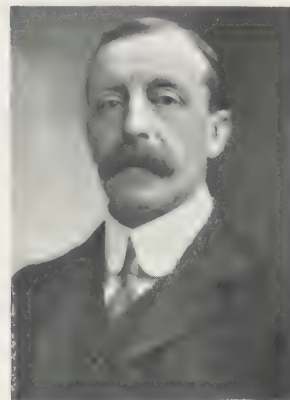


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Albert, Salthouse, Canning and Duke's Docks, Canning Half-Tide Dock and Graving Docks, George's Passage and Wapping and Chester Basins.—W. H. Wilcox, Pier Master, (in charge); (Office, S. Pier, Canning Half-Tide Dock)

Wapping and King's Docks Nos. 1 and 2, Queen's Dock, Queen's Branch Docks Nos. 1 and 2, Queen's Graving Dock, Coburg and Brunswick Docks and the passage at the north end of the Toxteth Dock.—Hugh Roberts (Office, S. Pier, Brunswick Dock Entrance).

Herculaneum and Herculaneum Branch Docks and Graving Docks, and Harrington and Toxteth Docks.—Charles E. Browne (Office, North Pier Herculaneum Dock Entrance).

Northern Entrances, Alfred Dock, the East Float and the Wallasey Dock, with the Locks attached thereto, and the supervision of the Duke Street bridge, the West Float and the Graving Docks at the West Float.—R. W. Parry (Offices, north and south sides Alfred Dock).

Duke Street Bridge, the West Float, and the Graving Docks at the West Float.—William E. Lee, Pier Master (in charge).

Morpeth and Morpeth Branch Docks, and Egerton Dock, the Vittoria Dock, the Birkenhead Warehouse Quay, the Joint Railway Companies' Quay at the south side of the East Float, and the water space to the southward of an imaginary line drawn from the north side of the entrance to Vittoria Dock to the north side of the passage leading to the Egerton Dock.—John Todd (Office, south side Morpeth entrance).

TRAFFIC MANAGERS.

District A.—William Kerr (Office, east end of Langton Branch Dock).

District B.—Joseph G. Savage (Office, south east corner of Canada Branch Dock No. 1).

District C.—Thomas Grimes (Office, Trafalgar Lock).

District D.—Thomas Pierrepont (Office, Albert Dock Offices).

District E.—William Jones (Office, north end of Brunswick Dock).

District F, Birkenhead.—William Cartwright (Office, south-west corner of Wallasey Dock).

HIGH LEVEL COAL RAILWAY.

Superintendent.—J. Thompson (Office, High Level Coal Railway).



ALFRED CHANDLER ESQ.
General Manager
& Secretary



WILLIAM C. THORNE ESQ. J.P.
Solicitor to the Board



THOMAS MONK NEWELL ESQ.
Engineer-in-Chief

Photos by Medringtons, Liverpool; Esme Collings, Liverpool; and Ruddock, Ltd., Newcastle-on-Tyne.

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Surveyors.—A. S. McConkey (Office, east end of Langton Branch Dock); John Lewis (Office, south-east corner of Canada Branch Dock No. 1); J. McM. Barr (Office, north end Brunswick Dock).

Superintendent of Weighing Materials.—William W. Clarke (Dock Office).

Principal Receiver of Rates and Dues, etc.—James Halsall.

Receiver of Duties on Tonnage, Pilotage, and Pilot Boat Rates, etc.—Joseph W. Kewley.

Receiver of Dues, Inwards, Foreign.—S. F. Frost.

Receiver of Deposits for Dock and Town Dues, etc., and also of Dues Coastwise.—W. M. Mitchell.

Receiver of Dues, Outwards, Foreign.—W. J. Cunningham.



A VIEW OF THE DOCK OFFICES.



[Liverpool]

UNDER THE DOME. FROM THE GROUND FLOOR.

[Richard Brown]



Richard Brown

UNDER THE DOME. FROM THE FIRST FLOOR.

Liverpool.



Liverpool

THE BOARD ROOM.

Richard Brown



Richard Brown

THE PRINCIPAL COMMITTEE ROOM.

Lizetpool.



Richard Brown

THE GENERAL MANAGER'S OFFICE.

Liverpool.



Richard Brown

THE RATES AND DUES OFFICE.

[*Liverpool*]



[Liverpool.]

THE TREASURER'S OFFICE.

[Richard Brown.]



[Liverpool]

THE ENGINEER'S DRAWING OFFICE.

[Richard Brown]



Brown, Barnes & Bell

LIVERPOOL IN 1650.

[*Liverpool*]

From a drawing by W. G. Herdman.



Brown, Barnes, and Bell

LIVERPOOL IN 1760.

[*Liverpool*]

From a drawing by W. G. Herdman.

PART I.

The Early History of the Port of Liverpool.

The early history of Liverpool is somewhat obscure. The most ancient document now in existence in which the town is mentioned by name is a deed executed in the reign of Richard I. by John, Earl of Mortain, afterwards King John, who was then Lord of the Honour of Lancaster, in which he confirms Henry FitzWarin in the possession of Liverpool. We may assume, however, that in these early days it was used as a place of shipment for the salt which was brought down the Mersey in considerable quantities from Cheshire, and that it commanded some share of the Irish trade by reason of its geographical position, and the natural harbour formed by the "Pool." This "Pool," probably the cause of the creation of a small town here, was a creek which left the River, where the Custom House now stands, and extended over the present Canning Place along Coopers Row, Paradise Street, and Whitechapel, as far as the Old Haymarket, and afforded shelter to the small boats engaged in the fishing and other industries.

From the time of King John we are able to trace more clearly the progress of the Port. This King was in reality the founder of the City. On his accession to the throne, desiring to prosecute to the best advantage his scheme for the complete conquest of Ireland, he determined to take possession of Liverpool and form a port. Up to this time there was no port in Lancashire, and Chester was too much under the control of its powerful Earl to be suitable for the King's purpose. In the Letters Patent of 28th August, 1207, John granted to the town the same status as that of any other free borough upon the sea and settlers were invited to take up allotments.

By the Sheriff's account of 1211 credit is taken for the carriage of men, cattle, etc., brought and forwarded to the Army in Wales and sent from Lancaster to Liverpool and thence to Chester.

It is certain from the frequent mention of the town soon afterwards that it had become very well known as a port, and we have evidence that Edward II. was a visitor in 1323. In 1326 mandates "for the searching of letters either coming into or going out of the Kingdom, and for arresting all suspected persons who should be found in the port" were directed to the Bailiffs and commonalty of Liverpool.

Gradually commerce and population increased, a Mayor and Councilmen were appointed, and we find corn, tallow, iron and wine being dealt in. Yet in spite of this, and for reasons which are now obvious, the town is constantly spoken of as "poor" and "decayed." In 1514 Henry VIII. sent a commission to enquire into the cause of the decrease in the revenue from Liverpool; the report, however, is not extant. Ireland at this time appears to have been the town's best customer. Leland in 1533 visited Liverpool, and reports that Irish merchants come much hither "as to a good haven," and also that there was good merchandise here and "much Irish yarn that Manchester do buy."

In the Municipal records under the year 1561 we find an account of a great storm which did much damage, destroying the breakwater of the old Haven. No mention can be found of the building of this jetty which in all probability was at the entrance to the Pool. A new haven was immediately constructed "turning the fresh water out of the old pool into the new Haven."

Towards the end of the Tudor period prosperity appears to have been returning, the income of the Corporation in 1590 reaching £86. In 1586 the customs dues produced £272, being more than those of the rival ports of Chester, Conway and Beaumaris put together.

From a very early period Chester had considered Liverpool a mere dependency and claimed the right to control her trade, constant friction between the two towns resulting. The matter was finally, under the Commonwealth decided in 1658 by the Surveyor-General of Customs in favour of Liverpool, a decision which was upheld in 1660 by the first Restoration Surveyor-General.

During the Commonwealth in 1649, Parliament thought fit to impose a tax for the support of the army based upon the yearly value of every man's real and personal estate. To this Liverpool replied that the best sort of her inhabitants had their estates in shipping "which is a daily adventure and hazard," and the rest were too poor to pay anything.

We thus see that then, as now, shipping was the principal industry of Liverpool. It is not surprising therefore to read of projects for improving the natural harbour or "Pool."

In Moore's rental which Sir Edward Moore compiled in the reign of Charles II. we find him exhorting his son to leave convenient land to make a street to face the Pool east, in view of the Pool being made navigable, when all the shipping would lie along his property. The intention

had been to extend and deepen the pool inwards so as to render it navigable along the line of Paradise Street with means for providing a supply of water for flushing in order to keep the channel clear.

This great undertaking was left in abeyance until the reign of Queen Anne when the Corporation determined to render the harbour as safe by art as the other great commercial ports of the Kingdom were by nature.



Brown, Farnes & Bell] THE OLD DOCK AND CUSTOM HOUSE IN 1721.
From a drawing by W. G. Herdman.

[*Liverpool*

The First Dock in England.

For some years all grants of land near the Pool made by the Corporation were subject to conditions connected with an intended dock, and in Nov., 1708, the Council resolved, "That Sir Thomas Johnson and Richard Norris, Esq., the representatives in Parliament of the Corporation, be desired and empowered to treat and agree for a person to come to the town and view the ground and plan of the intended dock." Accordingly the members for the borough arranged with Thomas Steers, a capable engineer, who surveyed

the ground, opposed the intended extension of the Pool and laid before the Corporation a plan for the conversion of the Pool into a wet dock, by impounding the water with floodgates so as to keep the vessels floating during the recess of the tide. A bill was immediately brought before Parliament soliciting power to raise money for the purpose. After much opposition the arguments for the promoters prevailed and a Public Act was passed (8 Queen Anne cap. xii.), authorising the forming of a dock at Liverpool, the first dock of the kind constructed in England, on a piece of ground (now the site of the Custom House) "containing 4 acres or thereabouts being a parcel of the waste belonging to the Corporation lying in or near a certain place called the Poole on the south side of the said town of Liverpool." Rates were authorised to be levied on shipping varying from 2d. to 1/6 per ton. The dock was opened in 1715 but it was not until 1720 that it was completed. In this same year acts were passed for rendering the rivers Mersey and Irwell navigable from Liverpool to Manchester.

In a very few years a single dock was found insufficient for the commerce of the port, and it was determined to construct a second one, to which the name of the Salthouse Dock was afterwards given, from a large salt warehouse which stood near the ground on which it was formed. It was also resolved to run out a pier on the north side of the entrance to the old dock to shelter vessels which had left the dock and were waiting in the river for a fair wind. The act authorising these additions was passed in 1737, the works being completed in 1753. The pier mentioned above formed a sea wall or northern boundary of the intermediate space extending from the old dock gut to the river, and which, having no floodgates, was empty at low water and hence called the dry basin. It was originally small but afterwards enlarged and extended to the northward. The trustees converted it into a wet dock in 1829, when it received the name of Canning Dock. The old dock was closed in 1826. Under this Act twelve Commissioners were appointed to audit the dock accounts.

In 1761 a third dock was authorised to be constructed on land lying between James and Chapel Streets. This was named the George's Dock (reconstructed 1825 and closed 1900) in honour of the King. At this time there were also erected lighthouses on the Cheshire and Lancashire banks of the Mersey, Light dues varying from ½d. to 2d. per ton being collected on all vessels according to length of voyage. By this new Act the property

in all the Docks, Piers, Buoys, Landmarks, &c., was vested in the Mayor, Aldermen, Bailiffs and Common Council of Liverpool, who were empowered to bring or defend actions under the name of the Trustees of the Docks and Harbour of Liverpool.

Following the termination of the American War of Independence the increase of commerce and shipping was so rapid that it was found necessary



Brown, Basnes & Bell

LIVERPOOL IN 1770.

[Liverpool.]

From a drawing by W. G. Herdman.

in 1785 to apply for powers to form additional docks. Under the powers then obtained the King's (opened 1788) and Queen's (opened 1796) Docks were formed, increasing the number of docks to five and enlarging the area to upwards of 28 acres. In 1799 an Act of Parliament was passed authorising the construction of two additional docks to the North of the George's Dock, but owing to pressure of war these plans were not proceeded with, but the increase of trade in 1808 and 1809 was so great that further delay was impossible. In 1811 an Act was passed reviving the powers for the construction of a new north dock (the Prince Regent or Prince's Dock opened in 1821), and also making changes in the administration. The management of the docks was now delegated to a committee of twenty-one selected from the Common Council, who were to be known as the Trustees of the Liverpool Docks, to be a Body Corporate, having perpetual succession

and a Common Seal. The proceedings of the Trustees were, however, subject to the veto of the Common Council in council assembled. Dock rates were to be levied on goods as well as ships, and it was enacted that for the future all Corporation lands taken for dock purposes were to be paid for by the Trust. The Graving Docks which had been constructed by the Corporation were transferred at a price to be settled by a jury. By this Act permission was given to fill up the old dock and to erect a Custom House Dock Office, and other commercial buildings on the site. In exchange for the land gained by filling up the old dock the Corporation agreed to transfer to the Trustees the land required for, and also to bear the cost of, enlarging the Queen's Dock. A small dock to the south was also made, called the Union, with a large outer basin subsequently formed into the Coburg Dock. In 1858 these two docks were united, the name "Coburg" being retained.

In September, 1826, shipping was cleared out of the old dock, and the foundation stone of the Custom House was laid in 1828. The building was opened in 1839 and contained, in addition to the Customs, Excise, Stamp and Post Offices, accommodation for the Dock Trustees. In 1825 an Act was passed giving power to extend the docks to the north and south, and also determining that in future the Common Council should only nominate thirteen members of the Dock Trustees, or "The Committee for the affairs of the Estate of the Trustees of the Liverpool Docks," as the body was now designated, and that the remaining eight should be elected by the dock ratepayers, who had hitherto been unrepresented, out of the body of Merchants or Shipowners of Liverpool, provided that no Merchant or Shipowner so elected should be a member of the Common Council.

Under this Act the Brunswick Dock for the use of the timber trade (opened 1832), and the Clarence Dock for steamers (opened 1830) were constructed by Mr. Jesse Hartley, who had been appointed Engineer in 1824. The Waterloo (opened 1834), Victoria and Trafalgar Docks (opened 1836) were also constructed under the Act of 1825.

The Albert Dock and Warehouses were opened by Prince Albert in 1846. This work had been carried out under an Act of Parliament passed in 1841.

For some little time the monopoly of the Dock Committee had been threatened. A company called the "Harrington Dock Company" had been formed to construct docks and warehouses on land purchased between the Brunswick Dock and Herculaneum Pottery. The Company spent about



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THE EXCHANGE IN 1674.

[Liverpool]

From a drawing by W. G. Herdman.



Brown, Barnes & Bell

THE OLD CUSTOM HOUSE.

[Liverpool]

From a drawing by W. G. Herdman.

£50,000 in preparing the ground and in the construction of two small inlets for river craft. In 1843 this Company was bought out at a cost of £253,000.

A more serious attempt was made at Birkenhead. When this town began to develop several of the more prominent inhabitants, including Sir John Tobin and Mr. William Laird, made large purchases of land on the margin of Wallasey Pool, and proclaimed their intention of constructing docks. The Liverpool Council, becoming alarmed, purchased 206 acres of this land in 1828 at a cost of £180,264, and gave notice for a Bill to construct docks on the Pool. The Dock Committee objected and the Bill was withdrawn. In 1843 some capitalists retained the services of Mr. Rendel, an engineer, who prepared plans for construction of docks. These plans were kept secret and the Liverpool Corporation were persuaded into selling the land on the water's edge. The moment the transactions were ratified a Bill was introduced and passed into law in 1844, for the conversion of the Pool into Docks. The Birkenhead Dock Company was formed and the Morpeth and Egerton Docks were opened in 1847. In December of the same year it was determined to wind up its affairs. The Company, however, tided over its difficulties and in 1848 purchased the Herculanum Dock estate on the Liverpool side. In 1855 the Birkenhead property was repurchased by Liverpool for £1,143,000.

By the Act of 1844 powers were given to construct docks at the north end of Liverpool, five docks, viz., the Salisbury, Collingwood, Stanley, Nelson and Bramley-Moore, being opened in 1848. The Wellington Dock and Half Tide basin were opened in 1849. The Sandon was the next dock to be opened, in 1851, and in that year an important change was made in the constitution of the Dock Committee, it being ordered that it should henceforth consist of 24 members, 12 to be nominated by the Council and 12 elected by the dock ratepayers.

In 1852 the Huskisson Dock, originally intended for the timber trade, was opened.

For some considerable time previous to this, there was much dissatisfaction among the merchants of Liverpool regarding the town dues, which had been levied by the Corporation on all goods landed and shipped, from the time of their purchase by the town from the Molyneux family in 1672. In 1833 an action regarding them resulted in a victory for the Corporation. This decision instead of settling the matter gave rise to much agitation in the manufacturing districts of Lancashire where it was believed that the dues were expended on the town of Liverpool and not on the Harbour and

Dock Works. A Royal Commission was appointed in 1853 which recommended the formation of a new body to take charge of the Docks and Harbour, and to whom all the property and dues should be transferred. A Bill to this effect was introduced in 1856, but was withdrawn in consequence of the opposition to it. In 1857 a similar Bill was promoted by the Manchester Chamber of Commerce, the Manchester Commercial Association, and the Great Western Railway Company. After a long and expensive struggle a Bill passed both Houses having the following important clauses:—

1. The Dock Trustees in future to be 28 in number.
2. The town dues to become the property of the Dock Trustees on payment of £1,500,000, and the Dock Trustees to take over £6,000,000 of the Corporate Debt, that sum being the amount supposed to have been expended on harbour purposes.
3. The Birkenhead Dock Estate to be made over to the new trustees charged with the then existing debt of £1,400,000.

Provision was also made for the conservancy of the river and estuary, the upper and lower reaches being placed under the charge of different bodies,—the estuary left with the Dock Board and the upper portion placed in the hands of a new trust representing the different interests concerned.

The New Board, 1858.

The Mersey Docks and Harbour Board, constituted by this Act of Parliament to take over the entire control of the Port accommodation, is a body of twenty-eight members. Twenty-four are elected by the Dock Ratepayers, *i.e.*, persons paying rates and dues on ships and goods only, and the remaining four are appointed by the Mersey Conservancy Commissioners, who consist of the First Lord of the Admiralty, the Chancellor of the Duchy of Lancaster, and the President of the Board of Trade. The new Board met for the first time on January 5th, 1858, when Mr. Charles Turner was elected Chairman.

The first work undertaken on the Liverpool side of the river was the construction of the Canada Dock, which was opened in 1859 for the special accommodation of the timber trade, which had outgrown the limits of the Brunswick Dock. Additional facilities were given by a half-tide basin north of the Canada and two cuts or docks on the east side. In 1864, at the extreme south end of the estate the Herculeum and two extensive graving docks were constructed. In 1867 the Waterloo Dock was reconstructed, large ware-houses being added. The increasing size of vessels made it now necessary

to extend the dock accommodation. An Act was accordingly obtained in 1873 to expend £4,100,000 on new docks at the north and south ends of the Estate. The works were immediately proceeded with, and at the north end the Brocklebank, Langton, with one branch, and the Alexandra, with three branches, were opened in 1881, the Prince of Wales performing the ceremony at the Langton Dock and the Princess naming the Alexandra. The Hornby Dock was opened in 1884,—the last of the northern series sanctioned by the Act of 1873. At the south end the Herculanum Dock was enlarged, and additional accommodation for the coal trade was provided. A branch dock out of the Herculanum Dock and a new graving dock were also added. The Harrington Dock was opened in 1883, and the Toxteth in 1888. A union dock between the Brunswick and Toxteth was completed in 1889.

During the time that these very large and important additions to the dock accommodation had been carried out, naval design had not been standing still. Great advances had been made in the beam and in the draught of the new vessels, which necessitated the provision of additional accommodation. An Act was therefore obtained in 1898 to enable the Board to effect various important improvements in previously constructed docks at an estimated cost of £3,562,000. Very great additions were made to the deep water quayage at the Canada and Huskisson branch docks, and the Canada Graving Dock was constructed. The South 'Carriers' Dock was also converted into a graving dock, and the Sandon Basin and Wellington Half-tide Dock were reconstructed as a half-tide dock for vessels of the largest type passing between the river and the docks. Another dock of the same depth as the Sandon half-tide was furnished in the Huskisson branch dock, No. 1, having a double storey shed on the north side, whilst the south side is occupied partly with a double storey shed and the remainder with a triple storey shed. Two further branch docks out of the Canada Dock and one branch dock on the east side of the Brocklebank have since been completed. The Canada-Huskisson system now affords greater depth of water and provides better accommodation for the present day giant liners than any other.

New Gladstone Docks. In May, 1908, the Dock Board approved a scheme for new docks at the north end of the estate, authorised by Act of Parliament in 1906. The total amount authorised for these new works is £4,500,000. The scheme embraces:—

1. A half-tide dock with river lock entrance, 870 ft. in length and 130 ft. in width, and having a sill 30 ft. below datum.

2. A lock, 645 ft. long and 90 ft. wide, between the Hornby Dock and the aforementioned.
3. A branch dock opening out of the half-tide dock and immediately to the north of the present timber storage ground, and having double storey sheds on the north and south sides.
4. A branch dock also opening out of the half-tide dock to the north of the proposed branch dock and two double storey sheds.

These docks are to bear the name "Gladstone," after the late Chairman of the Board—Robert Gladstone, Esq.

In order, however, to provide accommodation, in the near future, for vessels of exceptional size, the Board are constructing, immediately to the northward of the Rimrose River Wall, Seaforth, a large Dock (capable of being used as a Graving Dock when necessary), with a single storey shed, the requisite cargo cranes, railway lines, etc., on its North Quay. This Dock, which is nearing completion and is to be opened by His Majesty the King in July, 1913, will be approached direct from the river by way of a specially constructed channel, and will afford accommodation for ships up to 1,000 feet in length. The leading dimensions of the Dock, etc., are as follows :—

Length	...	...	...	...	1,050 feet
Width of Entrance	...	...	...	...	120 feet
Depth of Sill...	...	...	25 feet below Old Dock Sill	...	
Water Area	...	...	...	3 acres, 2,585 sq. yards	
Lineal Quayage (straight)	...	...	...	585 yards	
Shed Area	...	...	...	10,000 square yards	

The southern system has been remodelled under the Act of 1898. The improvements included the construction of deep water entrances to the Brunswick Dock, the deepening of the Brunswick Dock and underpinning of its walls in order that it might be used as a half-tide dock or vestibule to the reconstructed system, the extension of the south end of the Brunswick Dock and a single storey shed on the east quay of the Brunswick Dock, the reconstruction of the passage between the Brunswick and Toxteth Docks, the widening and deepening of the passages between the Brunswick and Coburg Docks and the Coburg and Queen's Docks respectively, and the deepening of the Coburg Dock between these two passages, straightening the north quay of the Coburg Dock, the deepening of the Queen's Dock, and construction on the west side, of a graving dock and two branch docks with double storey sheds, the widening and deepening of the passage between the Queen's and Wapping Docks, and the construction of two branch docks, with double storey sheds, on the west side of the Wapping Dock.

In 1900 the water was run out of the George's Dock, and works were commenced which resulted in the clearance of the space between the river on the west and the Church of St. Nicholas, and on a portion of this the Dock Board have erected their new Palatial Offices.

The offices of the Royal Liver Friendly Society; one of the tallest buildings in England, occupies part of the site, while the remainder is to accommodate the new offices of the Cunard Company, and a Corporation bathing establishment.

The Birkenhead Docks.

The transfer of the Birkenhead Dock Estate to the Mersey Docks and Harbour Board in 1857 has been of incalculable advantage to Birkenhead, partly because of the necessity of disarming the opposition to the Board and partly because of the knowledge of the Board of the great possibilities of the Cheshire estate. The extensions of the Morpeth Dock, the low water basin, and Alfred Dock, and Graving Dock in the rear, were undertaken. The Great Float was completed and the water admitted in November, 1860.

The Low Water Basin was a source of extraordinary trouble and labour. The foundations were of the most treacherous character and the work had to be constructed on a forest of piles. In September, 1863, the Basin was completed, being opened on the occasion of the visit of Admiral Dacres, commanding the Channel Fleet. In January, 1864, an attempt was made to work the gigantic system of sluices designed by Rendel to keep the Basin clear of silt and to maintain it at a depth of 10ft. below the level of the lowest tides, but the result was unsatisfactory. The sudden change of level in the Great Float, and the enormous rush of water from the entrance seriously endangered the safety of vessels. The Board then decided to convert the basin into a wet dock, which as altered now forms the Wallasey Dock. The great Northern entrances and the Alfred Dock having been completed were formally opened by H.R.H. the Duke of Edinburgh, on the 21st June, 1866.

The Alfred Dock has been lengthened and deepened, and maintains the connection between the Great Float and adjoining Docks and the river. A further new Dock, called the Vittoria Dock, has been constructed on the site of the Vittoria Wharf. The entrance to this Dock is from the East Float. The Dock is provided with single storey sheds, 100 feet wide, on its Quays, and is well provided with railway facilities. The cost of the work has been upwards of £350,000.

The Birkenhead Quays are equipped with sheds of modern type, and there are also provided in the system three graving docks.



VIEW OF THE DOCK ESTATE, LOOKING NORTH FROM CANADA TOWER.

The docks at Birkenhead are served by an extensive system of railway lines connected with practically all the quays, and several of the principal railway companies have large goods depôts adjoining the docks. The Board some years ago acquired a considerable area of foreshore abutting on the River Mersey, a short distance to the south of the entrances to the Birkenhead Docks, and a considerable portion of the foreshore has been leased by the Board to Messrs. Cammell, Laird & Co., Ltd., who have constructed thereon an extensive shipbuilding yard, two large graving docks and a wet dock in connection with the building of vessels of the largest size.



BARGE CRANE, "HERCULES."



CANADA AND HUSKISSON DOCKS, LOOKING SOUTH FROM CANADA TOWER.

HUSKISSON DOCK AND BRANCH DOCKS.

	Position and Width of Entrance or Passage.	Sill below Datum.		Water area.	Lineal Quayage.	
		Ft.	In.		Acres.	Yds.
Huskisson Dock	South ...	89	9	20	12	4273
Do. Branch No. 3 .....	...	...	...	8	780	0
Do. do. No. 2 .....	...	...	...	7	592	0
Do. do. No. 1 .....	...	...	...	9	1125	0

At these docks there are 52 hydraulic roof discharging cranes of a capacity of 30 cwts. each, and 10 hydraulic "loading off" wall cranes of 20 cwts. capacity, and in addition a steam crane of 15 tons capacity.

These docks are used by most of the largest vessels frequenting the Port, principally belonging to the following Companies:—

The Cunard Steamship Co., Ltd.
Messrs. James Moss & Co.

White Star Line.
French and Mediterranean Steamers.

The "Combine" Steamers.

SANDON DOCK.

SANDON HALF TIDE DOCK AND LOCKS.

	Position and Width of Entrance or Passage.	Sill below Datum.		Water Area.	Lineal Quayage.	
		Ft.	In.		Acres.	Yds.
Sandon Dock	West ...	90	0	20	10	1189
Do. Half Tide Dock .....	...	...	...	14	466	0
Do. (Lock 130 feet long)	West { North...	80	0	0	1155	0
Do. Do. 130 do.		100	0	0	1444	0
Do. Do. 165 do.		40	0	15	733	0

There are 17 hydraulic roof discharging cranes at the Sandon Dock.

This dock is used by the steamers of the Canadian Pacific Railway Co., and by vessels of deep draught generally.

WELLINGTON DOCK.

	Position and Width of Entrance.	Sill below Datum.		Water area.	Lineal Quayage.	
		Ft.	In.		Acres.	Yds.
Wellington Dock	West ...	70	0	6	7	4120

There is one nine-ton steam crane at this dock, and in addition a number of cranes on the portion of the High Level Coal Railway which is at the east end of this dock (see also Bramley-Moore Dock).

This dock is used by the steamers of Messrs. Donald Currie & Co., trading to Hamburg, the coasting steamers of the Limerick Steamship Co., Ltd., and by vessels loading at the High Level Coal Railway &c.



NELSON, BRAMLEY-MOORE AND SANDON DOCKS, LOOKING NORTH FROM VICTORIA TOWER.

The docks from the Collingwood and Stanley Docks to the Wapping Dock, inclusive, are used by the Steamers of the undermentioned, trading to Scotland, Ireland, and Coastwise and Home Trade Ports, &c., viz. :—

	Dock.	Trading to
The Dundalk & Newry Steam Packet Co., Ltd.	Collingwood	Dundalk and Newry
The Lancashire and Yorkshire Railway Co. ...	Collingwood	Drogheda
Sligo Steam Navigation Co., Ltd.	Clarence Half-Tide ...	Sligo
Clark & Grounds, and the Lancaster and Liverpool Shipping Co., Ltd., jointly ...	Clarence Half-Tide ...	Lancaster and Coastwise Ports generally
Liverpool and Cornwall Steamship Co., Ltd.	Clarence Half-Tide ...	North Devon and Cornwall
J. J. Mack & Sons.....	Clarence	Belfast and Ballina
Grainger & Co.	Clarence	Silloth
M. Langlands & Sons	Clarence	Glasgow and Scotland generally
John S. Sellers	Clarence	Preston
Henry Tyrer & Co.	Clarence	Preston, Silloth, South of Scot- land and Baltic
Robert Owen	Trafalgar	Carnarvon, Portmadoc, etc.
R. Gilchrist & Co.	Trafalgar and Victoria	Scotch and Welsh Ports
F. H. Powell & Co., Ltd. and Samuel Hough, Ltd.	Victoria	London and South Coast Ports
John Bacon, Ltd.	Victoria and Trafalgar	Bristol Channel Ports, etc.
Rogers & Bright, Ltd.	Victoria	Bristol Channel Ports
Thomas Bros. & Co.	Victoria	Holyhead, etc.
Wilson, Son & Co.	Waterloo	Cork
The Clyde Shipping Co., Ltd.	Prince's	Waterford
James Little & Co.	Prince's	Barrow-in-Furness
Belfast Steam Ship Co., Ltd.	Prince's	Belfast and Londonderry
G. & J. Burns, Ltd.	Prince's	Glasgow
John Pattinson & Son, Ltd.....	Prince's	Whitehaven
Marwood & Co.	Canning	Bristol and Cornwall
H. C. Topham	Canning Half-Tide ...	Ulverston
Laird Line, Ltd., and E. A. Davies	Canning	Westport and Larne
Michael Murphy, Ltd.	Salthouse	Cardiff
Thos. Orford & Son	Salthouse	Isle of Man

These Docks are also used by vessels importing cargoes of Grain, Sugar Nitrate, &c., and by Sailing Vessels loading, &c.

KING'S DOCK NO. 1.

Water Area	4 acres 3263 yards.
Lineal Quayage... ..	685 yards.

There are six electric roof discharging cranes at this dock each with a capacity of 30 cwts.

This dock is used by large steamers and sailing vessels generally.

KING'S DOCK NO. 2.

Water Area	4 acres 2055 yards.
Lineal Quayage... ..	670 yards.

There are six electric roof discharging cranes at this dock, each with a capacity of 30 cwts.

This dock is used by the steamers of the Serra and Tintore Steamship Companies trading to Spain, and by steamers and sailing vessels generally.



CANADA BRANCH DOCK NO. 3 AND BROCKLEBANK GRAVING DOCK, LOOKING EAST FROM CANADA TOWER.

QUEEN'S DOCK.

	Position and Width of Entrance.		Sill below Datum.		Water Area.		Lineal Quayage.	
			Ft.	In.	Acres.	Yds.	Miles.	Yds.
Queen's Dock	South	100	0	16	11	11	3326	0 945

This dock is used by the steamers of Messrs. Wilson Son & Co. and Messrs. J. T. Fletcher & Co. trading to Rotterdam, Antwerp, &c.

QUEEN'S BRANCH DOCK NO. 1.

Water Area	...	...	...	4 acres 4384 yards.
Lineal Quayage	...	...	...	654 yards.

There are 12 hydraulic roof discharging cranes, each of a capacity of 30 cwts., and also 12 hydraulic "loading off" wall cranes with a capacity of 20 cwts. each, at this dock.

The steamers of the Booth Steamship Co., Ltd., trading to the Brazils, use this dock, as also other large steamers, &c., trading to the port generally.

QUEEN'S BRANCH DOCK NO. 2.

Water Area	...	...	...	5 acres 140 yards.
Lineal Quayage	...	...	...	662 yards.

There are 13 hydraulic roof discharging cranes at this dock, each with a capacity of 30 cwts.

The discharging berth of the steamers of the Ocean Steamship Co., Ltd., and the China Mutual Steam Navigation Co., Ltd., jointly, trading to China, &c., is in this dock. The dock is also used by other large vessels trading to the port generally.



BARGE CRANE "SAMSON."



CLARENCE DOCK, LOOKING SOUTH FROM NELSON TOWER.

COBURG DOCK

Water Area 7 acres 3157 yards.
Lineal Quayage... 939 yards.

There is one seven-ton hand crane at this dock.

This dock is used by the steamers of Messrs. Yeoward Bros., trading to the Canary Islands, and by those belonging to Messrs. MacAndrews and Co., trading to Spain; also by the Cargo Steamers of the Isle of Man Steam Packet Co., Limited.

BRUNSWICK DOCK AND LOCKS.

	Position and Width of Entrance or passage.	Sill below Datum.		Water Area.		Lineal Quayage.	
		Ft.	In.	Ft.	In.	Acres.	Yds.
Brunswick Dock	{ North ...	100	0	17	0	15	4547
	{ South ...	100	0	17	0		
,, Lock (240 feet long)	{ North...	79	9	19	0	0	2133
,, Lock (350 feet long).....	{ South...	100	0	19	0	0	3889
						0	1498
						0	190
						0	272

The Brunswick Dock is used by the steamers of Messrs. T. and J. Harrison, trading to Calcutta, &c., by those of Messrs. R. P. Houston & Co., trading to the River Plate and South Africa, and by the steamers of the Cuban Conference Line. Other large vessels also use the dock in connection with the general trade of the port.



BRUNSWICK DOCK ENTRANCES.



R.M.S. "MAURETANIA" IN SANDON DOCK ENTRANCES.

TOXTETH DOCK.

	Position and Width of Entrance.	Sill below Datum.		Water area.		Lineal Quayage.	
		Ft.	In.	Acres.	Yds.	Miles.	Yds.
Toxteth Dock	South ...	60	0	11	2	0	1134
„ Lock, 177 feet long	West ...	50	0	7	2	0	118

There are nine hydraulic roof discharging cranes each with a capacity of 30 cwts., four hydraulic “loading off” wall cranes with a capacity of 20 cwts., and six electric cranes with a capacity of 20 cwts. each, at this dock.



ROOF CRANE, TOXTETH DOCK.

This dock is used by the steamers of Messrs. T. & J. Harrison, trading to Calcutta, etc., and by those of Elder, Dempster and Co., Ltd., trading to the West Coast of Africa.

HARRINGTON DOCK.

	Position and Width of Entrance.	Sill below Datum.		Water area.		Lineal Quayage.	
		Ft.	In.	Acres.	Yds.	Miles.	Yds.
Harrington Dock	South ...	59	3	11	3	0	1023
„ Lock, 131 feet long	West ...	21	3	5	3	0	320

There are eight hydraulic roof discharging cranes of 30 cwt. capacity each at this dock.

There are two five-ton hand cranes at this dock. The dock is used in connection with the discharge of grain-laden vessels and for general purposes.

EGERTON DOCK.

	Position and Width of Entrance.		Sill below Datum.		Water Area.		Lineal Quayage.	
		Ft. In.	Ft. In.		Acres. Yds.		Miles. Yds.	
Egerton Dock	West ...	69 9	7 4		4 469		0 704	

This dock is used by the Clan Line steamers trading to South Africa and India, and also in connection with the general trade of the port.

MORPETH DOCK AND LOCK.

	Position and Width of Entrance or Passage.		Sill below Datum.		Water Area.		Lineal Quayage.	
		Ft. In.	Ft. In.		Acres. Yds.		Miles. Yds.	
Morpeth Dock.....	West ...	69 9	5 2		11 2404		0 1299	
„ Lock, 398 feet long.....	East ...	85 0	11 8		0 3777		0 441	

There are two hydraulic cranes with a capacity of 25 cwts. each and one hydraulic crane of 25 tons capacity at this dock.

The Clan Line steamers, trading to South Africa and India, use this dock, as also other vessels generally.

MORPETH BRANCH DOCK.

	Position and Width of Entrance.		Sill below Datum.		Water area.		Lineal Quayage.	
		Ft. In.	Ft. In.		Acres. Yds.		Miles. Yds.	
Morpeth Branch Dock	West ...	84 9	14 0		4 243		0 637	

There is a hydraulic crane of three tons capacity at this dock.

This dock is used by the steamers belonging to Messrs. Gellatly, Hankey and Co., trading to China, etc., and also by vessels trading to the port generally.

GRAVING DOCKS.

In addition to the foregoing Wet Docks there are 22 Graving Docks at different positions along the line of Docks at Liverpool, and at Birkenhead, as shewn in the particulars given below.

One of these, the Canada Graving Dock (soon to be exceeded by the Gladstone Dock) is the largest Graving Dock in the world, being 925 feet 6 inches in length, and having an entrance 94 feet wide.

The pumping machinery for emptying this Graving Dock consists of three 51-inch Centrifugal Gwynne Pumps, which are capable of emptying the Graving Dock of its contents of 93,800 tons of water in 1 hour and 45 minutes.

For particulars as to the new Gladstone Graving Dock, see page 34.

LIVERPOOL GRAVING DOCKS.

Names and Position.	Width of Entrance.		Sill below Datum.		Coping at Hollow Quoins above Datum.		Length of Floor.		Total Length of Floor.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
(a) Langton, No. 1 .....(South)	{	Outer	60	0	5	6	27	0	448	0
		Inner	60	0	5	7	22	0	500	0
(a) Do. No. 2 .....(North)	{	Outer	60	0	5	5	27	0	500	0
		Inner	60	0	5	8	22	0	448	0
(a) Brocklebank			93	3	12	9	27	0	...	...
(a) Canada			94	0	12	11	28	0	...	...
Clarence, No. 1 .....(North)	{	Outer	44	6	2	5	26	6	451	0
		Sill above Datum.								
	{	Inner	45	0	0	1	18	0	289	0
		Sill below Datum.								
Do. No. 2 .....(South)	{	Outer	44	9	2	9	26	6	454	0
		Inner	32	9	0	1	18	0	286	0
Prince's			44	9	1	11	28	2	...	...
Canning, No. 1 .....(North)	{	Outer	35	3	3	1	23	3	436	0
		Inner	35	0	1	0	23	3	482	0
Queen's			80	0	16	2	28	0	...	...
* Herculeaneum, No. 1 .....(West)			60	0	3	4	26	0	758	6
* Do. No. 2			60	0	3	3	26	0	930	0
* Do. No. 3			59	6	3	5	26	0	768	0
* Do. No. 4 .....(East)			80	0	7	5	27	0	754	0

Total Length of Floor of the Liverpool Graving Docks }
(excluding the new Gladstone Graving Dock). } 10147 2

NOTE (a)—The depth of water on the Sills of these Docks can be increased, if desired, by the means described in Note (page 46) under Liverpool Docks.

* The depth of water over the sills of the Herculeaneum Graving Docks can be increased by pumping into the Herculeaneum Dock from the river so as to allow of deep drafted vessels entering the Graving Docks at low neap tides.

BIRKENHEAD GRAVING DOCKS.

Name and Position.	Width of Entrance.		Sill below Datum.		Coping at Hollow Quoins above Datum.		Length of Floor.		Total Length of Floor.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
West Float No. 1 (East)	59	6	4	1*	25	0	930	0		
No. 2 (Middle)	48	6	7	8*	25	0	750	0		
No. 3 (West)	85	3	7	1*	25	0	750	0	2430	0

Total Length of Floor of the Birkenhead Graving Docks 2430 0

* The Birkenhead Graving Docks share the benefit of the impounding of the Great Float, and in considering the depth of Water on their Sills it may be assumed that the Water Level is under no circumstances less than 20 feet above Old Dock Sill.



EXCAVATING GLADSTONE DOCK.



GLADSTONE DOCK COMPLETED.



THE SAND PUMP DREDGER "CORONATION."



CENTRE LADDER DREDGER, "WALTER GLYNN."

PART III.

Pilotage - Buoying and Lighting - Dredging - The Landing Stage - Warehouses.

Pilotage. The Mersey Docks and Harbour Board are the Pilotage Authority for the Liverpool Pilotage District (which extends from the Middle Mouse Island, off the North Coast of Anglesea, to the River Mersey), and have the whole and sole regulation and management of Pilots and of Pilot Boats and of the Pilotage Annuity Fund.

The Liverpool Pilotage Service was originally worked by twelve Sailing Pilot Boats, but in 1896 the Board, with the object of modernising the service, introduced two Steam Pilot Boats on the Stations, which proved so successful that two years later two additional Steam Pilot Boats were ordered and the entire fleet of Sailing Cutters disposed of. The Service is now worked by four Steam Pilot Boats, with a Steam Launch for River work.

Buoying and Lighting. The extensive system of Lighting and Buoying in the Liverpool Bay, the sea Channels leading to the Port, and in the River Mersey, is under the control of the Board. There are five Lighthouses, six Telegraph Stations, four Lightships, and 108 Buoys in the Liverpool District.

In the main Channel leading to the River Mersey, most, and in other Channels some, of the Buoys show flashing red lights on the port hand entering, and flashing white or green lights on the starboard hand entering, such lights being visible from three to four miles, and greatly assisting navigation at night time. The whole of the main channel leading to Liverpool is surveyed monthly by the Marine Surveyor and Water Bailiff.

Dredging. Some 13 miles from the Landing Stage is that long-standing handicap to the shipping of Liverpool, the Mersey Bar, a bank of sand and silt which obstructed or barred the entrance of vessels at low water. The lowering of this bar formed one of the main objects of improvement of the approaches to the river, as upon the depth obtained over the bar depended the class of vessels able to enter the river, and the period of time during which the entrance could be navigated. To increase the depth of water dredging was commenced as an experiment in 1890, two of the Board's ordinary Hopper barges, of 500 tons capacity each,

and until then used for carrying dock dredgings to sea, having been fitted with centrifugal sand pumps. These vessels were capable of filling their own hoppers with sand at the bar in about half-an-hour. The result of their work was favourable and in 1893 a new vessel named the "Brancker," after the then Chairman of the Board, with a capacity of 3,000 tons, was set to work. So marked was the success of this dredger that another vessel, the "G. B. Crow," named after the then Chairman of the Marine Committee, was ordered and commenced work in 1895.



THE SAND PUMP DREDGER "LEVIATHAN" (10,000 tons),
with one of the original 500 tons Sand Pump Dredgers alongside.

A new sand pump dredger, "The Coronation," was built in 1903 at a cost of about £75,000. This is a twin screw self-propelling dredger with a hopper capacity of 70,000 cubic feet, capable of filling itself with 3,500 tons of sand in 50 minutes from a maximum depth of 65 ft., and of propelling itself in its normal steaming trim with a full load and with coal bunkers and water tanks full at a rate of 10 knots per hour.

At the beginning of the year 1909 a still larger dredger, named the "Leviathan," was completed at a cost of £150,000, and put to work at the bar and in the sea channels. This is a twin screw self-propelling vessel with a hopper capacity of 180,000 cubic feet, capable of filling itself with 10,000 tons of sand in 50 minutes from a maximum depth of 70ft. The draught of the vessel when fully loaded is about 23ft.

Up to the end of the year 1912, the following quantities of sand had been removed from the Bar and the Queen's and Crosby Channels, viz. :—

Bar	...	...	51,052,640	Tons.
Queen's Channel	...	...	70,676,670	„
Crosby Channel	...	...	74,734,090	„
			196,463,400	„

Before dredging was commenced the depth of water on the Bar at dead low water of Spring tides was only 11ft., while now there is under the same conditions about 32ft.

The space over which dredging has been carried on at the bar measures about 6,000ft. by 1,500ft. wide, the latter being the average width of the



COMBINED GRAB HOPPER DREDGER.

buoyed channel through the bar. The quality of the material dredged varies from fine sand mixed with mud on the outer slope of the bar to a coarse sand on the inner slope.

Any vessel can now come over the bar practically at any state of the tide, and proceed direct via the Queen's and Crosby Channels into the Mersey, and, if she be a passenger liner, go alongside the Landing Stage and disembark her passengers.

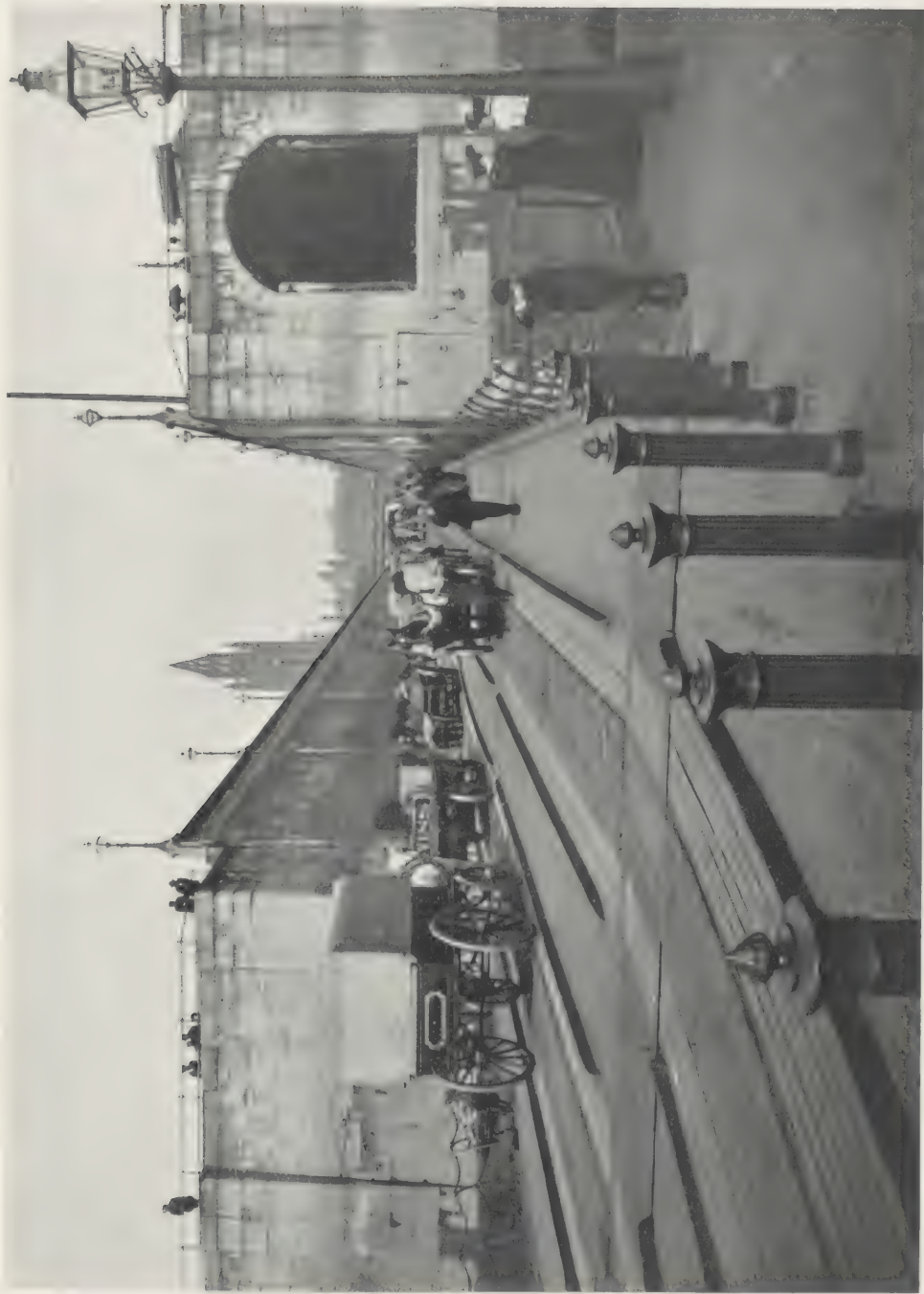
Towards the close of the year 1906 the Board, in order to prevent the erosion of the concave bend on the south side of Taylor's Bank in the Crosby Channel, and the corresponding northward extension of the Askew Spit, decided to "revet" that side of the said bank with stone. The work (which

was commenced early in 1909, and completed in November, 1910) consists in the deposit along the southern face of Taylor's Bank, below low water level and well outside the channel, of a layer of small lumps of hard stone in such a manner as to revet or clothe its slope, and so protect the underlying sand from erosion, By these means the channel has been made straighter and more easily navigable by large vessels. The total length of the revetment is about $2\frac{1}{2}$ miles.

In the Mersey, where the rise of the tide is so considerable, the total range between high and low water being as much as 33ft. on extreme spring tides and about 11ft. on neap tides, some device by which vessels could discharge and receive passengers and goods at varying levels of the tide early became necessary.

In 1847 the landing stage off St. George's Pier was accordingly constructed by the Dock Trustees, at an expense of £35,157. The stage was 500 ft. long, 80 ft. wide, and was supported on iron pontoons. This stage was soon found to be too small for the requirements of the Port, and in 1857 a new landing stage opposite the Prince's Pier was completed and opened at a cost of £130,000. It was 1,002 ft. in length and 81 ft. wide, connected with the land by three bridges rising and falling with the tide. The whole of the stage was reconstructed under the powers of an Act of Parliament of 1871. The two separate portions (the George's and Prince's stages) were united by a new construction, and the entire floating platform extended 2,063 ft. in length by 80 ft. in average width. It was now completed and awaiting inauguration by the Duke of Edinburgh, when, on July 28th, 1874, it was destroyed by fire, the loss being £150,000. In 1876 a new stage was completed and opened for traffic. Extensions have been made at various times until now the total length is 2,478 ft. or nearly half-a-mile.

The stage is a floating structure carried on iron pontoons, about 200 in number, the normal dimensions being about 80ft. long, 10 ft. wide, and 6ft. deep. The stage is held in position by a number of bridges connected with the shore and stage, by swivel joints and by mooring chains the shore ends of which are in the river wall. The level of the deck of the stage is about six to eight feet above the water, and, for the ferry passengers, gangways are arranged in fixed positions. For the transatlantic and other vessels moveable gangways are used and high level bridges adapted to the towering decks of ocean leviathans have been provided.



THE FLOATING BRIDGE, LANDING STAGE.

The main bridges are about 110 ft. long, and their incline to the shore is practicable for foot passengers at all states of the tide, but at low water the ordinary bridges would not be practicable for goods traffic, and to meet this case a floating bridge of special construction, 550 ft. in length, is provided near the centre of the stage.

On different parts of the stage Buildings and Offices have been erected for Shelter Sheds, Post, Telegraph, and Telephone Offices, Refreshment Rooms, Customs Examining Rooms, Shipping Offices, &c.

The large transatlantic liners come alongside the stage on their arrival at and departure from the Port at all states of the tide, and embark and disembark their passengers with the luggage, mails, &c. The Riverside Railway Station, constructed by the Board, was opened in 1895 for the special benefit of travellers who desired to proceed immediately to or arrive direct from London. The station occupies a position between the Landing Stage and the west side of the Prince's Dock, and has a total length of 790 ft.

Mechanical conveyors are provided for the transfer of luggage from steamers to railway carriages or other vehicles, and *vice versa*.

The floor of one of the bridges (No. 6) has been converted into two moving platforms worked by electricity and capable of travelling in reverse directions, so that trucks loaded with baggage may be wheeled on to one platform and go down to the stage and the empty trucks be returned by the other platform,—the bridge, when the platforms are stationary, being left available for passengers, etc., in the ordinary way.

The Prince's Jetty, a fixed pile structure extending from the north end of the Landing Stage to the south side of the Prince's half tide entrances, is specially arranged for the landing of cattle and goods from coastwise vessels at all states of the tide. Two moveable cranes, capable of lifting up to five tons, are provided. Adjoining is a wharf with pens for cattle.

The Warehouses of the Board present features at once

Warehouses. striking and unique.

Sailing up the River Mersey, the most important building to be seen on the Dock Estate is the recently erected Tobacco Warehouse at the Stanley Dock, which is probably the largest warehouse in the world, being 125 ft. high, with a total floor area of about 36 acres.

The building consists of a vault, quay, and twelve fire-proof upper floors, the latter specially constructed for the storage of tobacco, of which they are capable of storing about 60,000 casks in single tier, *i.e.*, without any piling. The quay floor of the warehouse is, of course, used for the landing of cargoes from vessels in the Stanley Dock, and the basement is used for the storage of general goods. Some idea of the magnitude of this warehouse may be gathered



THE TOBACCO WAREHOUSE, STANLEY DOCK.

from the fact that 27,000,000 bricks and about 6,000 tons of iron were used in its construction. The warehouse is fitted with hydraulic lifts, hoists, &c., and is lighted by electricity. There are also two smaller blocks of warehouses at the Stanley Dock, with a total capacity of about 38,000 casks of tobacco.

At the present time there are over 110,000 casks of tobacco stored at the Board's warehouses at Liverpool, which is more than at all the other ports in the United Kingdom put together.

Special warehouse accommodation has also been provided by the Board for the storage of grain both at Liverpool and Birkenhead. The warehouses at the East Waterloo Dock, on the Liverpool side of the river, have a capacity for about 30,000 tons of grain, in addition to a large quay for the landing, etc., of goods. The grain warehouses at Birkenhead are situated on the north side of the East Float, and have a storage capacity for about 30,000 tons of grain. Each of these warehouses is fitted with hydraulic machinery lifts, bands, elevators, etc., for the proper and expeditious handling of grain, which can be stored either on floors or in silos.

The Wool Warehouse, which is specially set apart for the storage of that article, is situated a little to the eastward of the new tobacco warehouse, and has an actual storage capacity for 118,000 bales of wool, but as it is

the practice for the wool to be placed "on show" at the said warehouse for public auction, the actual working capacity is reduced to about 54,000 bales. The top floor is provided with a weaving shed roof specially constructed to give a good north light for the convenience of wool buyers. An addition has recently been made to this warehouse, whereby its capacity is increased by about 50 per cent.

Warehouses for the storage of general goods are erected over the Quays of the Albert and Wapping Docks.



A TYPICAL CARGO SHED.

Special mention may be made of the several large Cold Storage Depôts in the Port, including one situated in the Albert Dock Warehouses, about the centre of the Dock Estate. There are other Depôts in close proximity to the docks at the North End of the Dock Estate.

The Cattle Trade at Liverpool is dealt with at the Mersey Cattle Wharf on the Cheshire side of the River Mersey, and the cattle are landed at two stages (Woodside and Wallasey) from the steamers engaged in the trade.

The animals and the carcases of animals slaughtered at the Mersey Cattle Wharf are distributed all over the United Kingdom.

Tank accommodation for the storage of petroleum in bulk has been provided by the Board at the south end of their Estate at Liverpool, and similar accommodation has been constructed at Birkenhead by the large oil companies. The tanks are in direct communication with the railways.

PART IV.

GARSTON DOCKS AND ESTATE.

(From information officially supplied by the L. & N.W. Railway Company).

Mr. J. Roughley, *District Traffic Superintendent and Dock Master.*

The Garston Docks, with their adjacent warehouses and storage grounds, coal reception lines, and general marshalling sidings, all the property of the London and North Western Railway Company, are situated on the Upper Mersey, about four miles South of the Liverpool Docks, and on the same side of the river. The growing importance of Garston as a general and coal shipping centre is largely attributable to its geographical position, since it is in close proximity to the manufacturing districts of Lancashire, Yorkshire and the Midlands. It is also within an exceptionally short haul from the South Lancashire and North Staffordshire Coalfields.

DOCK ACCOMMODATION.

STALBRIDGE DOCK.

	Width of Entrance.	Depth of water on sill.		Water Area.	Berthing space.
		Spring.	Neap.		
Stalbridge Dock	65 feet.	35 feet.	25 feet.	14½ acres.	3,170 feet.

With a Lock 276 feet long.

At this dock are 15 portable hydraulic cranes with lifting capacity 50 cwts., and two portable hydraulic cranes with lifting capacity four tons. Extensive coaling facilities have been provided, there being four moveable hydraulic tips, each of thirty tons capacity, fitted with anti-breakage appliances and end doors on shoots mechanically controlled by operator. These tips are of the latest and most up-to-date type, and capable of tipping coal into vessels at any height up to 45 feet from quay level. The four tips are capable of operating simultaneously into the same vessel.

The lock in connection with this dock enables craft also to enter or leave the other docks approximately two or three hours before or after high water, communication passages existing between the Old, North and Stalbridge Docks. The very far reaching importance of such a convenience will be appreciated by Shippers and Shipowners alike.



Photo by L. & N. W. Co.,]

Crewe

View of Stalbridge Dock, Garston. Area $14\frac{1}{2}$ acres.



Photo by Morris Richards,

[Garston.

S.S. "Navarino," 415 feet long, 52 feet beam, loading 8,500 tons coal at L. & N. W. Railway Company's Stalbridge Dock, Garston. Four Hydraulic Hoists operating simultaneously.

NORTH DOCK.

	Width of Entrance.	Depth of water on sill.		Water Area.	Berthing space.
		Spring.	Neap.		
North Dock.....	55 feet.	28 feet.	18 feet.	8 acres.	2,400 feet.

At this dock are Sheerlegs 40 tons capacity ; 13 portable hydraulic cranes, with lifting capacity of 30 to 50 cwts. For coaling there have been provided two moveable hydraulic tips, each of 30 tons capacity, fitted with anti-breakage appliances, and end doors on shoots mechanically controlled by operator. Both tips can be used for one boat at the same time. There are also four fixed high level tips of less capacity.

OLD DOCK.

	Width of Entrance.	Depth of water on sill.		Water Area.	Berthing space.
		Spring.	Neap.		
Old Dock.....	50 eet.	25 feet.	15 feet.	6 acres.	2,160 feet.

There are 15 portable hydraulic cranes, with lifting capacity 30 to 50 cwts and one hand crane 8 tons. For coaling there are three fixed high level tips.

Extensive warehouse and shed accommodation is provided on the Estate, including a Customs Transit shed. In order to facilitate the general operations in connection with the important business in Minerals, the Company have provided special premises, adequately fitted with appliances for the purpose of sampling. "Floored" berths of a special character have been provided, and accommodation now exists for upwards of 100,000 tons of minerals.

There are about 48 acres of storage ground specially levelled for timber and provided with sidings at convenient distances from each other, so as to admit of cargoes being sorted, piled or selected, as may be necessary. Special accommodation has been provided for heavy logs, and travelling cranes are available for stacking, &c., which are capable of piling logs to a height of 30 feet.

Coal shipments are conducted day and night, a complete electrical installation being in operation sufficient to light the Dock entrances, coal hoists, quays, sidings, and storage area, as well as the extensive shunting and marshalling yard on the estate. This system of lighting is also extended to portable lamps for use in the holds of vessels, wherever the nature of the cargo will permit.

Garston being a railway port goods are transferred direct from ship to railway wagon, or vice versa, thus reducing handling, &c., and obviating costly cartage, advantages representing a great saving to merchants.

The additional area provided by the new Stalbridge Dock is a great factor in ensuring despatch, the fine range of coal tips, which are of the most modern type, supplying unsurpassed facilities for the expeditious shipment of coal. The coalfields and manufacturing districts of Lancashire, Staffordshire, Yorkshire and the Midlands are in close proximity to Garston, and the geographical position of the Port should prove of immense advantage to Merchants and Steamship Owners alike, whose business connections are with those centres of activity.

In addition to the many facilities provided by the Company in their effort to make the Port complete in all equipment, it should be mentioned that tenancies have been granted on their estate whereby Engineers, Ship Store Dealers, Repairing Shops, &c., are brought conveniently near, to the benefit of steamship owners who wish to take advantage of the loading or discharging days in order to effect slight repairs, alterations, &c., without causing delay to vessels.

The London and North Western Railway Company, as owners, control the entire working of the docks, which are of course directly connected with their main line system, and through the latter with the systems of all the railway companies in the country. There are some 70 miles of sidings at the Port, of which eight miles are actually on or alongside the quays, and therefore available for direct working of cargoes from shipside to trucks, or vice versa. The Railway Company have two passenger stations on the estate (viz., at Dock Road and Church Road), and these are about five minutes walk from the Docks.



PART V.

THE COMMERCE OF THE PORT.

In the previous chapters the rise and progress of the Dock Estate has been traced. It now remains to consider the trade of the Port which has necessitated the building of these docks with their warehouses and up-to-date appliances for loading and unloading the huge ships which bring wealth to the city.

In the year 1757 the number of vessels entering the port was 1,371, and the total rates and dues paid on vessels and goods £2,336 15s. In 1912 the number of vessels had risen to 23,483, with tonnage of 17,327,415, the total rates paid on vessels reached £805,726 18s. od., and the rates and dues paid on goods £753,227 17s. od. It should be noticed that the tonnage last mentioned merely represents the tonnage of vessels paying rates inwards *or* outwards, as the case may be. To arrive at the total tonnage entering and leaving the port, the tonnage of 17,327,415 tons must be doubled—34,654,830 tons.

As regards her export trade Liverpool stands without a rival in the kingdom, as the following comparison of the values of exports for the year 1911 at the ports named below will show :—

Liverpool	-	-	-	-	-	-	-	£185,539,801
London	-	-	-	-	-	-	-	143,160,009
Glasgow	-	-	-	-	-	-	-	31,531,638
Southampton	-	-	-	-	-	-	-	31,410,879
Hull	-	-	-	-	-	-	-	30,618,209
Cardiff	-	-	-	-	-	-	-	12,667,833
Swansea	-	-	-	-	-	-	-	8,035,988
Bristol	-	-	-	-	-	-	-	4,017,312

In the matter of import trade Liverpool stands second to London alone and much exceeds each of the other ports mentioned.

The Mersey Docks and Harbour Board, moving with the spirit of the times, has established a department to follow up inquiries from traders and up-country firms with a view of affording them information regarding the facilities and charges relating to traffic arrangements at this port. The Board have in addition opened offices in Birmingham (60 Exchange Buildings) and Leeds (26 Royal Exchange Chambers), where all information may be obtained and they will also arrange for their representative to call upon traders at their request in regard to these matters.

The Corn trade is associated with the earliest annals of the port. Corn was included in the list of articles upon which the Corporation claimed the right of levying town dues, and in consequence of foreigners (as non-freemen were called) not being allowed to trade in the town, much information is obtainable of the trade in early days. The life of a corn merchant in the reign of Elizabeth was not a happy one. "Forestalling" and "regrating" were severely dealt with, thus preventing entirely any speculation. In 1562 we read "no freeman shall buy on the market day in open market over six wyndles of any one grain, and no farmer or traunter shall buy any corn until the town be served." Traunters were carriers or pedlars against whom an order was made that they should not buy above two wyndles.

In 1591 Giles Brooke, Mayor in the following year, was fined for exporting grain to Ireland. These fines were rigidly enforced, the more so because the bailiffs were entitled to a share of all fines. The exclusive right of grinding corn belonged to the families of Moore, and Crosse of Crosse Hall, who received one bushel in every twenty ground.

In the Directory of 1766 only eight names are to be found identified with corn; the number of bakers was eight and of flour men fifteen.

In 1805 Liverpool was made a warehousing port, and consequently was rendered free for all nations to import, deposit and re-export merchandise without paying toll or tax unless intended for home consumption. The effect of this Act was soon felt, and it is not surprising, therefore, to read of a proposal to establish a Corn Exchange in place of the old market, where ducks, geese, and pigs roamed at random.

In the Municipal Records under date of April 2nd, 1806, is found the following:—"Received the report of the Select Finance Committee on the subject of the intended Corn Exchange proposed to be established in this town, and stated that the proceedings of an open commercial Corn Exchange in the town of Liverpool will meet with their entire approbation and co-operation under proper and suitable rules and regulations."

This Exchange was opened in Brunswick Street in 1808. The accommodation, however, soon proved quite inadequate, and an enlarged and improved Exchange was opened in 1850 and the Corn Trade Association formed to regulate the customs of trade.

It is interesting to compare the imports of 1770 with those of the present day. In that year the imports of grain into Liverpool were:—Wheat (and flour) from the Isle of Man, 12 bags; foreign oats, 6,050 quarters; Irish oats,

239 quarters ; barley from the Isle of Man, 24 quarters ; oatmeal, 30 bags. In 1912 nearly 2 million tons were landed in Liverpool.

Special accommodation has been provided by the Dock Board for the storage of grain both at Liverpool and Birkenhead. The warehouses at the East Waterloo Dock on the Liverpool side of the river have a capacity for about 30,000 tons of grain and occupy 11,550 square yards. The warehouses at Birkenhead are situated on the North side of the East Float, and are capable of storing about 30,000 tons.

Of late years the Port of Liverpool has developed enormously as a milling centre and is now, in all probability, the second largest in the world.

The Virginia Tobacco trade was one of the earliest and most diligently cultivated of the rising branches of commerce in the town. The correspondence of Sir Thomas Johnson, of the Norris family of Speke, and of others in the early part of the eighteenth century is full of tobacco, the fluctuations of the trade and of the various devices resorted to in order to make things pleasant with the revenue officers and to escape payment of duty. In the reign of Charles II. the trade had become very important and by the end of the seventeenth century the Liverpool imports of tobacco were the largest in the kingdom.

In 1795 a large building was erected by the Corporation on the East Side of the King's Dock as a bonded dépôt and store. In a few years, more storage room was required, and in 1811 the Corporation undertook the erection of a much larger warehouse on the West Side of the King's Dock. Owing to Dock improvements at the King's Dock, which necessitated the removal of these premises, a new Tobacco Warehouse was constructed at the Stanley Dock. This warehouse is probably the largest in the world, having a total floor area of about 36 acres, equal to 174,240 square yards. It is built in one block, the total length being 723 feet, the width 165 feet, and the height from the level of the road and excluding the vault 125 feet.

As a tobacco centre Liverpool has no rival in the country. In 1825 the stock in the Liverpool warehouses amounted to 9,011 hogsheads, while at the present time no fewer than 110,000 hogsheads are stored here and during the year 1912 nearly 38,000 tons were landed.

The first indication of the Cotton Trade in Liverpool is found in an advertisement of November 3, 1758 :—"To be sold by auction at Forbes and Cambell's Saleroom, near the Exchange, this day at one o'clock, 25 bags of Jamaica Cotton, in five lots." In 1766 we have the first mention of Cotton Brokers, Sir George Drinkwater, of Thomas Street, and Mr. Charles Lowndes, of Water Street. At this time the



THE COTTON EXCHANGE.

Exchange was within the building now known as the Town Hall, and in that position it remained for almost half a century, from the beginning of the cotton trade to the removal to Chapel Street. With the introduction of new spinning machinery the imports of raw cotton increased and Liverpool took the lead in the trade. After the destruction by fire of the interior of the Exchange in 1795,

the reconstructed building was named the Town Hall, and a new Exchange was erected in Chapel Street in 1808.

For some time after the close of the American Revolutionary War, very small quantities of cotton were imported into Liverpool from the United States, the great bulk coming from the West Indies. The growth of the trade was now very rapid. In 1770 we find about 6,000 bags arriving, in 1800 this had increased to 92,000 bales, while in 1811 a total of 250,000 bales was reached. In 1808 the system of purchase by sample was introduced instead of the old method of inspection of bulk. The year 1841 saw the formation of the Cotton Brokers' Association.

The laying down of the Atlantic cable and the establishment of the sale of futures resulted in considerable changes in method, one result being the formation of the Cotton Clearing House.

In 1852 two barrels of cotton arrived from Cape Coast Castle, being the first grown on the West Coast of Africa. Strenuous efforts are now being made to increase the imports from British Possessions, the general feeling being that it is much to the advantage of manufacturers to obtain as much of the raw material as possible from the Colonies in order to break down the destructive speculation, the dire results of which are often experienced in East Lancashire. British-grown cotton is now landed at Liverpool from East and Central Africa, Natal, West and East India, the Leeward Islands, the Windward Islands, and Queensland, while the foreign-grown comes from the United States, Brazil, Turkey, Peru, San Domingo, China, and Egypt. The imports from all sources landed in Liverpool in the year 1909 amounted to 778,335 tons.

In 1896 a new Cotton Exchange was opened, and ten years later the present palatial building in Oldhall Street was opened by the then Prince and Princess of Wales.

In Sir Edward Moore's account of Dale Street in 1667 we find the first mention of the opening of the trade with the West Indies which has since been a source of great wealth to Liverpool. Speaking of a plot of land in Dale Street he says—"Sugar House Close. This croft fronts the street for some 27 yards and I call it the Sugar House Close, because one Mr. Smith, a great sugar baker at London, a man, as report says, worth forty thousand pounds, came from London to treat with me. According to agreement he is to build all the front 27 yards a stately house of good hewn stone, four storey high and then to go through the same building with a large entry, and then on the back side, to erect a house for boil-

ing and drying sugar, otherwise called a sugar baker's house. If this be once done, it will be a trade of at least £40,000 a year from the Barbadoes, which formerly the town never knew."

This Mr. Smith was in partnership with John Danvers. Daniel Danvers, a brother of John, appears to have come to Liverpool about 1670 to manage the sugar refinery here. He quickly rose to be a very prominent citizen and the proprietor of a large and successful business.

The sugar trade thus commenced has continued to the present time, the streets off Dale Street being still the centre of the industry. The imports of sugar during the year 1909 amounted to nearly 350,000 tons.

The Cattle Trade is dealt with at the Mersey Cattle Wharf **Cattle Trade.** where accommodation is provided for about 6,600 head of cattle and 22,000 sheep, with extensive chill rooms with a capacity of 3,380 carcasses, and slaughter-house room for 3,400 head of cattle and 3,000 sheep per day.

All the recent improvements in connection with this extensive trade have been introduced and it is generally acknowledged that the wharf is the most complete and best appointed in the kingdom.

During the year 1912 163,550 oxen, 349,542 sheep and 69,016 pigs were dealt with.

At the base of the cliffs, on the east and south sides of the Herculaneum Dock, chambers have been excavated in the solid rock for the special purpose of affording a safe and convenient means of storing petroleum in barrels. These magazines are each 50 feet long, 20 feet wide, and 19 feet high, and are separated by a wall of solid rock 5 feet thick. The magazines are capable of containing 60,000 barrels of petroleum.

For storage in bulk, tanks have been erected, two of the capacity of 3,000 tons, one of 2,500, and two of 2,000 tons; the total capacity, therefore, being 12,500 tons, or about 80,000 barrels. Pipes are laid from the west quay of Herculaneum Branch Dock to the tanks, which are filled by means of the ships' pumps. The filling of barrels by gravitation is carried out on the terraces below the tanks, and the filled barrels are removed by road and railway, laid at the level of the dock quays. The tanks are surrounded by moats capable of containing the whole contents of the tanks in case of accident.

In addition to the foregoing, Tanks for the storage of Petroleum, particularly Petroleum Spirit, have been erected by private enterprise on land leased from the Board at the West Float, Birkenhead.

**Provision
Trade.**

For many years Liverpool has been in the front rank in the Provision Trade. Being the gateway of the Atlantic it is only natural that the large number of ships trading with Canada and the United States of America should return laden with food products. The corn trade has already been dealt with. There remain, however, the enormous bacon imports, cheese, canned goods, butter, eggs, &c.

**Miscellaneous
Trades.**

In addition to the trades enumerated above, many other articles are imported very largely. Among the most important are wool (the growth of which trade has necessitated the building by the Dock Board of a special warehouse in Great Howard Street, with inspection room for the Yorkshire buyers); palm oil and kernels; rubber, both from Brazil and the West Coast of Africa; timber, ivory, fruits (green and dried), hides, tallow, &c., &c.

**Ship-building and
Ship-repairing
Yards.**

Liverpool in the days of wooden sailing ships was a ship-building centre of some importance, but since the advent of iron and steel ships, that trade has developed more rapidly in places like the Clyde and the Tyne, which are nearer the coal and iron supplies. It looks however, as though a revival of the ship-building industry is taking place on the River Mersey, for the old-established firm of Laird Brothers, Birkenhead, having amalgamated with the steel plate makers, Cammell and Co., of Sheffield, the amalgamated company has spent an immense sum of money in providing on the shore of the Mersey, at Tranmere, one of the most up-to-date and best equipped ship-building establishments in the country. These premises extend to 76 acres, and consist of launching slipways, two wet docks for repairing purposes, one 15 acres in extent, and the other $2\frac{3}{4}$ acres, two Graving Docks, respectively 900 feet long and 95 feet wide, and 750 feet long and 85 feet wide, engine erecting, machine and numerous other shops and appliances, including a large electric crane capable of lifting 150 tons.

There are also many firms who undertake repairs to ships within the Port. Of these mention may be made of Harland & Wolff, Limited, who have recently embarked upon a huge scheme of workshops at Bootle, David Rollo and Sons, Sandhills, Clover, Clayton & Co., Ltd., at Birkenhead, and H. & C. Grayson, Ltd., in the West Float, Birkenhead, and at Garston.



R.M.S. "MAURETANIA" AT THE LANDING STAGE, SHOWING RIVERSIDE STATION.

PART VII.

RAILWAY FACILITIES.

Liverpool being the principal distributing centre for the North and Midlands, it follows that an extensive system of rail communication is one of the first essentials to its success.

Nowhere in the British Isles, or even in the World, will be found a more elaborate and on the whole effective network of lines, than those which serve the docks on both sides of the Mersey. On the eastern shore of the river the London and North Western, Lancashire and Yorkshire, Midland, Great Northern, Great Central, and Cheshire Lines have direct communication with the Dock Board's system, while the Great Western extensive system is connected by their working arrangements with the London and North Western via Crewe, and the Cheshire Lines via Helsby. On the Birkenhead side the Great Western, London and North Western, and Great Central Companies give facilities for rail despatch.

In addition, three smaller lines are concerned with the port, the Wirral the Mersey, and the Overhead, of which the first two are principally engaged in the suburban passenger business, while the third provides inter-communication along the line of docks at Liverpool for passengers.

The extensive system of lines which traverse and intersect the Dock Estate in all directions, are the property of the Mersey Docks and Harbour Board, which body also owns the double line of railway for goods which runs underneath the Overhead Railway.

Between Herculaneum Dock at the southern boundary, and Hornby Dock in the north, are no fewer than 15 great goods stations belonging to one or other of the Companies named above. The London and North Western lines run back like the spokes of a wheel to a centre at Edge Hill, the Lancashire and Yorkshire draw most of their traffic from the north end, their tracks running parallel with the river and at no great distance from it, though there is one L. and Y. depôt in the south.

The Cheshire Lines with the constituent Companies (*viz.*: the Great Northern, Great Central, and Midland Railways) have a large Coal Depôt at Herculaneum Dock, and extensive Goods Stations at Brunswick Dock and Huskisson Dock, fitted with electric light and hydraulic power.

The Midland Company also have independent Goods Stations at Alexandra Dock and Sandon Dock.

Within the Dock Estate the horse reigned supreme as a means of haulage until 1895, when the Board decided to permit the use of locomotives on the goods lines above referred to.

These greatly facilitated the handling of the traffic, for whereas five horses had been required to draw six wagons, one engine was permitted to haul as many as 14; there was, however, no increase in speed, the trains being restricted to four miles an hour.

In 1904, negotiations were entered into between the Board and the Liverpool Railway Companies with the view of bringing the railways into direct communication with the ships in dock. These were shortly afterwards brought to a successful issue, with the result that so far as despatch is concerned, Liverpool need fear no rival.

THE LONDON AND NORTH WESTERN RAILWAY.

To Liverpool belongs the honour of having been a pioneer in the adoption of railways, for, though one or two small lines were in operation at an earlier date, it was unquestionably the outstanding commercial success of the Liverpool and Manchester Railway that led to their general adoption as a means of communication. The first "Railway" proposed in the district was for an "Outram Plateway" from Manchester to Bolton, Wigan & Liverpool; this was in 1779, but nothing tangible was ever done in the matter. In 1825 a committee of merchants was formed to promote a line to Manchester but their Parliamentary Bill aroused the fiercest and most unscrupulous opposition and was ultimately thrown out. In the following year, some of the most violent opponents having been pacified, the Bill passed, and George Stephenson having been appointed engineer, the work of construction was pushed forward rapidly. The railway started at what is now the Wapping Goods Station and proceeded in tunnel to Edge Hill, this tunnel being completed in June, 1828. In October, 1829, the celebrated Rainhill locomotive trials were held when Stephenson's "Rocket" carried off the £500 prize. In the following September the line was opened throughout, a gloom being cast over the inaugural ceremony by the death of Mr. William Huskisson, M.P. for Liverpool, who was run over by the "Rocket" at Parkside and died the same evening at Eccles Parsonage.

The original passenger station was in Crown Street but in 1832 an Act was obtained to construct an extension, and a new terminus at Lime Street was opened on August 15, 1836. Thereafter development went on apace; rail communication with Birmingham via Warrington was opened in 1837 and to London in 1838. In 1846 the London and North Western Railway Company

came into existence by the amalgamation of the Liverpool and Manchester, Grand Junction, London and Birmingham, and other lines. The Victoria tunnel (Waterloo Goods Station to Edge Hill) was opened in 1849; Runcorn Bridge was brought into use in 1869, shortening the distance to London and Birmingham by nine miles; the Bootle lines from Edge Hill first carried traffic in 1870, this last enabling the L. & N.W. Railway to complete its chain of goods depôts along the line of docks.

Running from south to north this company's goods stations are placed in the following order :—Brunswick, Wapping (Park Lane), Waterloo, Canada and Alexandra. At Brunswick, Canada and Alexandra accommodation is provided for the timber trade while the important cattle trade is catered for at Stanley Market Station on the Bootle branch. At Edge Hill, where the three main arteries of goods traffic from Wapping, Waterloo, and Bootle converge, an extensive array of "gridiron" marshalling and sorting sidings has been laid down, whereby the wagons are shunted by gravitation, made up into complete trains and despatched with great facility.

In 1895 the L. & N. W. Railway obtained access to the Riverside Station for the convenience of London passengers from and to the Atlantic liners.

THE LANCASHIRE & YORKSHIRE RAILWAY.

The Lancashire and Yorkshire Railway system crosses England from the Irish Sea on the West to the North Sea on the East, and on the way it spreads out in all directions, linking up every important town and



Lancashire and Yorkshire Railway Electric Train on the service between Liverpool, Southport and Crossens; and Liverpool, Aintree and Maghull.

trade centre, and many, if not most, of the smaller towns. The Company's mileage at the present time is 597 miles. The Company is a large owner of steamships, and it is interesting to note, as illustrating the wide extent covered by the Company's services, that it is possible for merchandise to be brought from Copenhagen to Goole by the Company's own steamers, placed in L. & Y. trucks, and handed over to the Company's system from Goole to Liverpool, and thence transhipped into the Company's steamers from Liverpool to Drogheda, a total through distance of 895 miles, which, for the length of lead, is unequalled in the transport facilities offered by any other British Railway Company.

The City of Liverpool, with its spacious dock accommodation, and its vast shipping trade, is well served by the Lancashire and Yorkshire Railway, which is identified with the commerce of the port through the establishment of seven well-equipped goods stations along the line of docks. Mention must also be made of the very excellent passenger services provided by the Company from Exchange Station. In addition to the through express service to Manchester, Halifax, Bradford, Leeds, York, Newcastle, Hull, Glasgow, Edinburgh, etc., there is a very frequent service of electric trains to Southport and intermediate stations; also to Ormskirk. During the summer months there is a hourly service of through trains between Dingle Station, the Liverpool Overhead Railway, and Southport (Chapel Street).

THE GREAT WESTERN RAILWAY.

The Great Western Railway system extends over 3,000 miles, and is the longest line in the kingdom. It provides express passenger and merchandise services and most complete arrangements for dealing with all descriptions of traffic to and from Liverpool with London and the Southern Counties, Birmingham and South Staffordshire, the West of England and North and South Wales. For traffic requiring to be dealt with alongside ship or warehouse in railway trucks, arrangements exist for working the traffic to and from their line over the lines of the Cheshire Lines Railway via Helsby, and over the London and North Western Railway via Crewe. Collection and delivery of all descriptions of traffic from all parts of the Port are provided for by barging and cartage. Extensive warehouse accommodation is available for traffic waiting shipment, the principal depôts being Carriers Dock and Stanley Dock at the North end, James Street and Manchester Dock near the Landing Stage, and Dukes Dock at the South end, while a new depôt is in course of construction in Chaloner Street, near to Queen's Dock. A central depôt is also

available at Hood Street, near the St. John's Market. The Company have through booking arrangements for passenger and parcels traffic to and from Liverpool—(1) Viâ Woodside Ferry, (2) Viâ Lime Street, and (3) Viâ Mersey Railway and Rock Ferry, and have the most up-to-date arrangements for the collection and delivery of parcels traffic by means of motor vehicles.

The passenger and parcels offices are situated at 11 James Street, 3 Ranelagh Street, Hood Street, near St. John's Market, and at the Landing Stage, and representatives of the Company meet all the liners arriving at and leaving the Port.

THE MIDLAND RAILWAY.

The Midland Railway Company obtain access to Liverpool over the Cheshire Lines, of which they are part owners, enabling them to run through express trains between Liverpool (Central) and all parts of the Midlands and South and West of England. These services are mainly worked in two sections, the destination of one being London and the other Bristol. On the line of route are many of the principal towns of the Kingdom, such as Derby, Leicester, Nottingham, Birmingham. In addition to these a direct service with Sheffield is given *via* Chinley. They also run through trains between Liverpool (Exchange) and Scotland, by virtue of the running powers they possess over the L. & Y. Line between Liverpool and Hellifield *via* Blackburn.

The Company is extensively represented in Liverpool for purposes of Goods and Merchandise Traffic, having commodious depôts at Victoria Street, Alexandra and Langton Dock, Brunswick, Huskisson, Sandon and Canada Dock, and Birkenhead.

In the matter of hotel accommodation the Midland is well represented in Liverpool by the "Midland Adelphi" Hotel, close to the Central Station, the new extension of which has recently been opened.

GREAT CENTRAL RAILWAY COMPANY.

Passengers for the Great Central Company's route proceed from Liverpool (Central) for Manchester, Sheffield, Grimsby, Hull, and viâ Lincoln and March for Cromer, Lowestoft, Yarmouth and Eastern Counties; Nottingham, Leicester, Rugby and London (Marylebone), and to the South and West of England viâ Banbury.

To the Continent viâ Grimsby, a daily service (Sundays excepted) is maintained by the Company's new saloon steamers to Hamburg, and a tri-weekly service to Rotterdam and Antwerp. This Company's trains depart also from

Seacombe for Chester, Hawarden, Caergwrle Castle and Wells, Wrexham and Ellesmere.

The Great Central Company has, in addition to the use of Brunswick (S) and Huskisson (N) Stations, for all kinds of dock and town traffic, an independent station at the north end, viz.: Alexandra and Canada Dock, situated opposite the Canada Dock, Branch No. 3, and connected with the main line by means of the Dock Board rails.

The offices of the Traffic Manager, Mr. T. H. Underwood, are situate at 6 India Buildings, Fenwick Street, Liverpool.

GREAT NORTHERN RAILWAY.

This is one of the great national railroads of Great Britain. As a partner in the East Coast Route, it is the shortest route from London to most parts of Scotland, and reaches more quickly than its competitors such important places as Aberdeen, Dundee, Inverness, Edinburgh, Perth, Newcastle, Harrogate, Hull, Leeds, Bradford, Sheffield, Lincoln, Grimsby, York, Sunderland, and the Hartlepoons. It taps almost every town of importance in the Northern, Midland and Eastern Counties: from Lowestoft on the East Coast to Liverpool and Southport on the West.

The Company's Goods Stations in Liverpool are Huskisson at the North end and Brunswick at the south end. Both stations are connected by rails with the line of docks, and goods can be dealt with in rail trucks at ship's side. Every facility is provided at the stations for the despatch, or storage, of all classes of merchandise, and a through service is given to London, the Midland Counties of Nottinghamshire, Derbyshire and Leicestershire, and the hives of industry in the West Riding of Yorkshire.

The Company undertakes all the duties necessary to the clearance of shipments both inwards and outwards. Their head office in Liverpool is centrally and conveniently situated at 15 Victoria Street.

THE CHESHIRE LINES.

The Cheshire Lines Committee consists of nine members of the Directorates of the Great Northern, Great Central, and Midland Railways, three appointed by each to represent them on the board of the Cheshire Lines, hence "Committee" in the title, the railway being the joint property of these three huge undertakings.

The permanent way, station buildings, and general equipment of the Cheshire Lines are of the most up-to-date description. There are extensive goods depots at Birkenhead, and at Brunswick, Huskisson, and Wavertree Road

in Liverpool, all constructed to deal with heavy merchandise traffic. Hydraulic power and electric light are in use at these depôts.

The Cheshire Lines established a regular hourly service as long ago as July 1877, between the two great seats of commerce, Liverpool and Manchester. These express trains, some of which accomplish the journey in forty minutes are rarely a minute behind scheduled time. Notwithstanding their high rate of speed, very little oscillation is felt, a perfectly laid permanent way and a superior construction of carriage doing away with unpleasant jolts and vibrations. The punctuality and perfect arrangements adopted, have been an inducement to hundreds of business people to take advantage of the many facilities afforded them, and in consequence new villas and country residences have sprung up and fresh suburbs developed in the neighbourhood of the line especially in those portions adjoining the two great centres, Liverpool and Manchester.

The Committee carry large numbers of tourists and excursionists who pass through Liverpool every summer en route for the Isle of Man, the Welsh Coast and Ireland, and other points where ready access is obtained by the numerous steamers plying to and from Liverpool.

The facilities offered by the Cheshire Lines Railway for passengers wishing to join the various steamships departing from Liverpool are excellent, and in most cases consist of free conveyance of through booked passengers and luggage by omnibus between the Central Station and Landing Stage in Liverpool.

Passengers to or from Dublin, Belfast, and beyond, together with their luggage, are conveyed across Liverpool free of charge, and during the summer season similar arrangements are made for Isle of Man, and North Wales traffic.

The Chief Offices of the Cheshire Lines Committee are situate at the Central Station, Ranelagh Street, Liverpool.

RIVERSIDE STATION.

In 1895 the facilities for dealing with the Atlantic passenger traffic were substantially increased by the opening of the Riverside Station. Previously it had been necessary for steamer passengers to and from other towns to cross the City by road between the railway stations and the landing stage, which had been felt to be a distinct inconvenience.

The new arrangement, however, entirely remedied this, at least as far as the London and North Western Railway is concerned. The new terminus is situated alongside the Prince's Landing Stage and by means of permanent and moveable gangways, voyagers are enabled to pass direct from train to steamer,



THE RIVERSIDE STATION.

or vice-versa without leaving shelter. Connection with the general railway system of the country is effected by means of the Waterloo tunnel from Edge Hill, which, opened in 1849, had previously been used for goods traffic only.

On June 12, 1895, sanction for the opening of the new station and connecting line having been received from the Board of Trade, a special train was run to connect with the White Star Liner "Germanic," the arrangements for embarking some 50 travellers working without a hitch. Much more attention was attracted to the Cunard special with numerous passengers for the "Campania" on the following Saturday, and with the departure of passengers arriving by the "Umbria" from New York, the evening of the same day, the new order of things may be said to have commenced. The formal opening of the station was, however, deferred until July 10. Since then one or more special trains have been run to or from the Riverside Station in connection with almost every Atlantic liner using the port and some hundreds of thousands of travellers have appreciated the convenience thereby afforded.

THE OVERHEAD RAILWAY.

As far back as 1852 a speedy and frequent means of communication along the line of docks was already in the category of "long-felt wants." In that year a proposal was put forward by Mr. Greathead to build an

elevated railway from the Mersey Forge in the south to Huskisson Dock in the north, a distance of about four miles, but the scheme never got beyond the stage of being talked about.

Permission was subsequently given by the Dock Board for omnibuses to ply along the railway running the length of their Estate. They were, however, clumsy and heavy vehicles, and their slow rate of progress was still further reduced by the restrictions it was necessary to impose to avoid interference with the all-important goods traffic. By 1879 it had become evident that the dock railways could no longer accommodate the omnibuses and the question of an overhead line once more came to the front.

In 1882 Parliamentary powers were obtained by the Mersey Docks and Harbour Board to construct a double line of railway on an elevated superstructure, but many members of that body were unwilling to add to their responsibilities by undertaking the construction and subsequent management of a railway.

Accordingly in 1887 a second Act of Parliament was passed, enabling the Board to transfer its powers, and in the following year the Liverpool Overhead Railway Co. was incorporated under the Chairmanship of Sir William Forwood. The original contract provided for a line extending



from Herculaneum Dock at the southern extremity of the Dock Estate to Alexandra Dock in the north, a distance of about five miles, and this portion was opened for traffic in 1893. The railway was subsequently extended at both ends, the northern prolongation being to Seaforth Sands and the southern to Park Road, Dingle, in 1896. Later developments have included connections with the Lancashire and Yorkshire, Liverpool and Southport, and Liverpool, Linacre Road and Aintree lines at Seaforth in 1905 and 1906.

Powers have also been acquired to connect the Overhead line with the Cheshire lines system by means of a spur line from Herculaneum to St. Michael's, but so far nothing has been done, a remark which applies to a scheme to construct a line from Seaforth to Sefton on the Southport and Cheshire Lines Extension Railway.

Except on the Dingle Extension, where the line is in tunnel for about half-a-mile, and near Bramley-Moore Dock, where it descends to surface level to permit a coal branch from the Lancashire and Yorkshire Railway to pass over it, the track is carried on a viaduct at a height of about 20 feet, and is supported by wrought iron columns with concrete foundations.

The motive power adopted is electricity, the motors being carried on the cars themselves. The power is supplied from a generating station at Bramley-Moore Dock, and the current is taken from the conductor rail by a collector of the usual slipper type.

The stations average rather over a third of a mile apart, and a five minutes service of trains in each direction is maintained from about 5.30 a.m. to 6.30 p.m., after which the interval is ten minutes. The speed averages about 17 miles per hour, including stoppages, but fast trains which omit calling at certain stations are run morning and evening for the convenience of business men.

It will thus be evident that exceptional facilities exist for getting from one part of the Dock Estate to another, facilities which are fully appreciated by all who have business with the shipping of the port.

AT BIRKENHEAD.

The earliest railway in the Wirral Peninsula was the Chester and Birkenhead line which was opened for traffic in September, 1840. For many years it was owned by a local company but in 1859 the Great Western extended their system to Saltney Junction outside Chester, and in the following year protracted negotiations were terminated by the existing railways in Wirral becoming the joint property of the L. and N. W. and G. W. Railways.

There was, of course, ferry communication across the Mersey from the first, but in 1872 a beginning was made with the Mersey Tunnel, which was ultimately opened for traffic in 1885, and two years later by the extension from Hamilton Square to Park, the Wirral Railway, the Hoylake section of which was opened in 1866, was brought into direct communication with Liverpool.

The Mersey line was subsequently converted to electric traction, the first train under the new system being run on May 3, 1903.

The principal goods stations in connection with the joint railway are at Cathcart Street, Egerton Street, Abbey Street, and Grange Lane. The Cheshire Lines have an extensive depot at Shore Road. The Great Central Company have also a Goods Station at Dock Road for dealing with all kinds of shipping traffic.



LIVERPOOL CUSTOM HOUSE.

CANAL FACILITIES.

LEEDS AND LIVERPOOL.

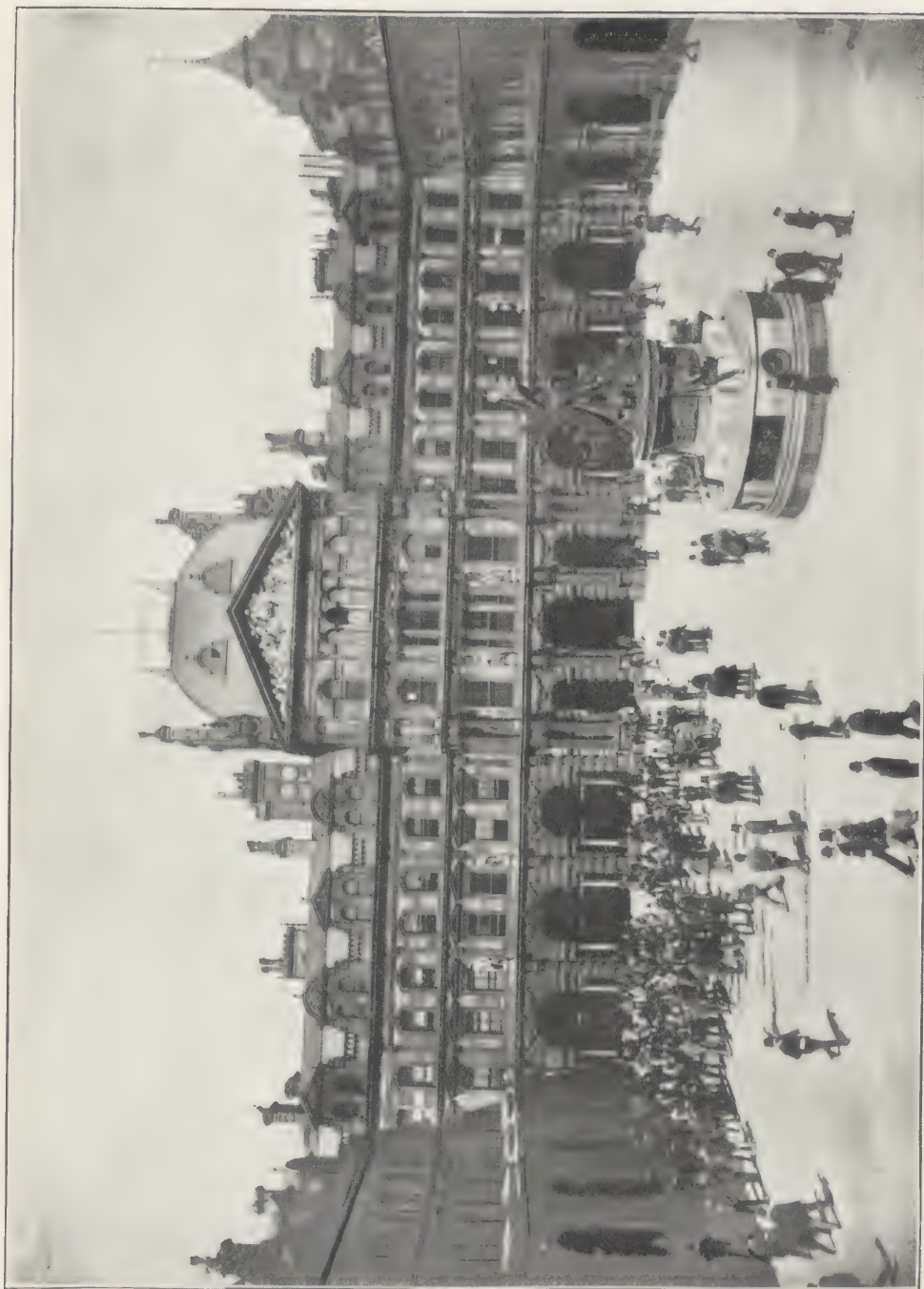
The Leeds and Liverpool Canal Company has direct communication with the Liverpool and Birkenhead Docks and warehouses on the Mersey Docks and Harbour Board estate, by way of their Canal locks from the main line Canal into Stanley Dock at Liverpool, as marked on the plans of the Dock Estate contained in this volume. Traffic is daily dealt with by them as general carriers to and from the Liverpool and Birkenhead Docks and the following principal towns:—Wigan, Leigh, Blackburn, Church, Accrington, Burnley, Nelson, Skipton, Keighley, Bradford, Leeds, Goole and Hull, and intermediate towns. The Company's wharves in Liverpool and district are at Pall Mall, Bankhall Street, Caroline Street (Strand Road) and Tower Road, Birkenhead. The head office of the Company is at Pall Mall, Liverpool, and the Traffic Manager is Mr. Alfred Peplow.

ROCHDALE CANAL.

The Rochdale Canal Company are general carriers between Liverpool, Birkenhead and Manchester, and the districts served by the Canal and other navigations connected therewith. Warehouses and wharves are provided by the Company at Liverpool, Manchester, Rochdale, Heywood, Littleborough, Todmorden, Hebdon Bridge, Sowerby Bridge and other places for the accommodation and storage of merchandise of all descriptions. Information respecting the conveyance of traffic can be obtained on application to the Company's local agents, or from the general Manager and Secretary, Mr. W. A. McGrath, at the head offices, Dale Street, Manchester.

SHROPSHIRE UNION.

The Shropshire Union Railways and Canal Company's system affords carriage by water between the Mersey and many important towns in Cheshire and Shropshire. By means of its connections, goods are carried to Birmingham, Stoke-on-Trent, and the Potteries, Wolverhampton, Shrewsbury, Nantwich, Oswestry, Whitchurch, Newport, Market Drayton and other towns, and at these places the company has extensive wharf and warehouse accommodation. The head offices of the company are at Chester, and the offices of the Liverpool District Superintendent at Mann Island, Pier Head.



Pristley

THE EXCHANGE.

[Egmont]



LIME STREET AND ST. GEORGE'S HALL

APPENDIX.

THE LIMITS OF THE PORT.

The limits of the Port of Liverpool as defined by the first Dock Act (1709) were "as far as a certain place in Hoyle Lake called the Redstones, and from thence all over the River Mersey to Warrington and Frodsham bridges."

The Customs Port was defined by Treasury Minute, dated 3rd November, 1896, as follows:—

"Commencing at the termination of the Port of Chester, viz., at the
"Redstones in Hoyle Lake on the point of Wirral, and continuing up the
"River Mersey on the Cheshire shore thereof to the west side of the
"entrance to the Manchester Ship Canal at Eastham, thence in an
"easterly direction across the said entrance and along the Cheshire shore
"of the river to Ince Ferry, the western termination on the Cheshire
"shore of the Port of Manchester, thence crossing the said River Mersey
"in a supposed straight line to Dungeon Point, being the western
"termination on the Lancashire shore of the said Port of Manchester,
"and continuing along the coast of the County of Lancaster to the
"southern boundary of the Port of Preston, viz.: an imaginary line
"drawn in a true north-north-west direction from the inner north-west
"sea mark on the beach at Formby Point."

LIVERPOOL OBSERVATORY, BIDSTON.



Brown, Barnes & Bell

BIDSTON OBSERVATORY.

[*Liverpool*

The Observatory on Bidston Hill was constructed in 1867, in lieu of the Observatory at the Prince's Basin, which was taken over by the Mersey Board from the old Dock Committee of the Liverpool Corporation, on the 1st of January, 1858.

Astronomical and meteorological observations are made at the Observatory, and appliances have been provided for the registration of Earthquakes, &c.,

and also for the testing of Marine Chronometers, Sextants, Watches, &c.

By means of a Time Gun on the Morpeth Dock Pierhead, Birkenhead, Greenwich time, computed at the Observatory, is communicated to the Port from the Observatory at one o'clock p.m. daily except Sundays.

The Observatory is maintained by the Board under an Act of Parliament passed in 1857.

MERSEY CONSERVANCY.

OFFICES, 66 VICTORIA STREET, LONDON, S.W.

Commissioners, The First Lord of the Admiralty, the Chancellor of the Duchy of Lancaster, the President of the Board of Trade.

Acting Conservator, Vice Admiral Sir Arthur Mostyn Field, K.C.B., F.R.S., F.R.G.S., F.R.MET.S.

Clerk to the Commissioners, P. D. Thompson.

LOCAL MARINE BOARD.

CANNING PLACE (EAST) LIVERPOOL, W.

Chairman, R. Hughes-Jones.

Secretary to the Board, Commander F. M. Cavendish-Sergeant, R.D., R.N.R.

Examiners of Masters and Mates, Commander F. M. Cavendish-Sergeant (Chief Examiner); Lieutenant J. D. Keatinge, R.N.R. (Second Examiner); Captain C. L. A. Lecoustre (Third Examiner).

Clerk to Examiners, George W. Hart.

BOARD OF TRADE MERCANTILE MARINE OFFICE.

LIVERPOOL—MARINERS' PARADE, W.

Chief Superintendent and Registrar, R.N.R. Captain Thomas E. Sargent.

Assistant-Superintendent and Assistant Registrar, James Stewart, R.N.R.

Deputy-Superintendent and Cashier, J. R. Rule R.N.R.

Deputy-Superintendent in Charge (Garston), J. N. Garnock, R.N.R.

Superintendent in Charge (Birkenhead), H. Pye, R.N.R.

Superintendent in Charge (Burton Street), T. Warren, R.N.R.

Overlooker (Outdoor Staff), Captain H. S. Smith.

BOARD OF TRADE SURVEYORS.

OFFICES : CANNING PLACE.

Captain H. Lyle Leitch, Principal Officer for the Liverpool District.

Nautical Surveyors, Capt. G. Jenkin, Capt. P. G. Lowe, Capt. D. Smith.

Ship Surveyors, T. F. Jenkins, T. W. Renans. One vacancy.
Engineer Surveyors, T. Rowley, A. E. Laslett, R. Stevenson, A. E. Coe,
T. Miller, J. Dow, E. F. Maroney, C. H. Haller, H. Valentine, J. Thomson.
Medical Officers, Dr. C. Burland, Dr. D. D. F. Macintyre,

INSURANCE.

The rise of Liverpool to its present position as one of the greatest seaports of the world has been followed by the establishment of a number of important offices for the purpose of Marine Insurance, in which Liverpool ranks second to London alone among the markets of the world.

Among the leading Companies whose head offices are in Liverpool are the British and Foreign (founded 1863), The Maritime (founded 1864), The Reliance (founded 1881), The Sea (founded 1875), The Standard (founded 1871), The Thames and Mersey (founded 1860), and The Union Marine Insurance Co. (founded 1863). In addition to these most other companies of importance whose headquarters are elsewhere are represented in Liverpool.

The great Fire Insurance Companies, which are a distinctive feature of Liverpool commercial enterprise, find in the goods moved inwards and outwards through the Port large and valuable interests to be secured against the perils of fire in warehouse, on quay, or in transit to or from inland points in the United Kingdom. The Royal, The Liverpool and London and Globe, The London and Lancashire, and the Norwich Union Fire are factors of the highest importance and value in the commercial organisation of the City, which can hardly be thought of deprived of these giant companies.

THE LIVERPOOL SALVAGE ASSOCIATION.

The Liverpool Association for the protection of Commercial Interests as respects Wrecked and Damaged Property. Established 1857. Incorporated 1881. Also Surveying Agents to Lloyds' for Cargoes and Agents National Board of Marine Underwriters, New York.

COMMITTEE.

G. E. Martindale (*Chairman*), Thames and Mersey Marine Insurance Co., Ltd.
J. P. Rudolf (*Senior Deputy Chairman*), Standard Marine Insurance Co., Ltd.
H. Sumner (*Junior Deputy Chairman*), Maritime Insurance Co., Ltd.
J. Sandeman Allen, Union Marine Insurance Co., Ltd.
S. Barker, Sea Insurance Co., Ltd.
N. B. Barnes, Standard Marine Insurance Co., Ltd.
J. Davies, British and Foreign Marine Insurance Co., Ltd.

F. R. Edwards, Reliance Marine Insurance Co., Ltd.
 W. A. Edwards, Sea Insurance Co., Ltd.
 Wm. Gow, British and Foreign Marine Insurance Co., Ltd.
 T. H. Harper, Thames and Mersey Marine Insurance Co., Ltd.
 J. Meyer, Alliance Assurance Co., Ltd.
 J. C. Nicholson, Maritime Insurance Co., Ltd.
 J. Pemberton, Reliance Marine Insurance Co., Ltd.
 O. H. Rathbone, Union Marine Insurance Co., Ltd.

General Manager and Secretary, F. H. Lowe, The Anchorage, Waterpark Road, Prenton.

Assistant Secretary, D. C. Kinghorn.

Surveyors and Wreck Agents, Chief Surveyor, Captain Fred W. Young, M.I.MECH.E.; Capt. J. W. Batchelor; Capt. W. J. Richards; Capt. H. Williams; Lieut. J. H. Dathan, R.N.; Capt. I. J. Kay.

Cargo Surveyors, F. H. Madge, W. Camm, R. M. Theaker, J. Maguire.

Salvage Steamers, "Ranger," "Linnet," "Lady Kate."

Head Office, A20 Exchange Buildings, Liverpool.

Telephone No. 143 Central (day or night).

London Office, 27 Cornhill, E.C.

CONSULAR CORPS, LIVERPOOL.

J. O. Bunster, *Doyen*.

ARGENTINA.—*Consul*, Alfredo Colmo, 51 South John Street. *Vice-Consul*, J. C. Godoy.

AUSTRO-HUNGARY.—*Consul*, J. Pisko. *Vice-Consul*, Henry D. Behrend, 28 Paradise Street. *Conseiller*, Chev. Rottauscher de Malata.

BELGIUM.—*Consul*, E. Verspreuwen, 8 Fazakerley Street. *Vice-Consul*, Gaston Verspreuwen.

BOLIVIA.—*Consul-General*, Nestor Cueto. *Consul*, R. A. Barker. *Vice-Consul*, Lionel Barber, 18 James Street.

BRAZIL.—*Consul-General*, Sully Jose de Souza. *Hon. Vice-Consul*, W. O. Punshon, 51 South John Street.

CHILI.—*Consul-General*, J. O. Bunster, 10 Cook Street.

COLOMBIA.—*Consul*, Luis Enrique Bonilla. *Vice-Consul*, Th. Delahunt, 39 South Castle Street.

COSTA RICA.—*Consul*, R. Bulman, Mersey Chambers.

CUBA.—*Consul-General*, J. de Ayala, Tower Buildings. *Vice-Consul*, J. E. Gomez.

DENMARK.—*Consul*, J. F. Carøe, 16 Cereal Court, Brunswick Street.

ECUADOR.—*Consul*, E. Wright, 1 Brunswick Street. *Vice-Consul*, E. A. Maulme.

- FRANCE.—*Consul*, R. Boeufvé. *Vice-Consul*, de Ferry de Fontnouville, 51 South John Street.
- GERMANY.—*Consul*, H. Kern. *Vice-Consul*, Ed. Meyer, 51 Oldhall Street.
- GREECE.—*Consul*, B. A. Malandrinos, Fenwick Chambers, Fenwick Street.
- GUATEMALA.—*Consul*, Dr. José Azurdia, 12 Chapel Walks.
- HAYTI.—*Consul*, E. Purgold, 11 Rumford Street. *Vice-Consul*, Theo Ruete.
- HONDURAS.—*Consul*, Ernesto Fletes, 15 Chapel Walks.
- ITALY.—*Consul*, Count A. Dall-Aste Brandolini, 51 South John Street.
- JAPAN.—*Consul*, P. E. J. Hemelryk, J.P., Cotton Exchange.
- LIBERIA.—*Consul*, Ellis Edwards, 8 Fazakerley Street.
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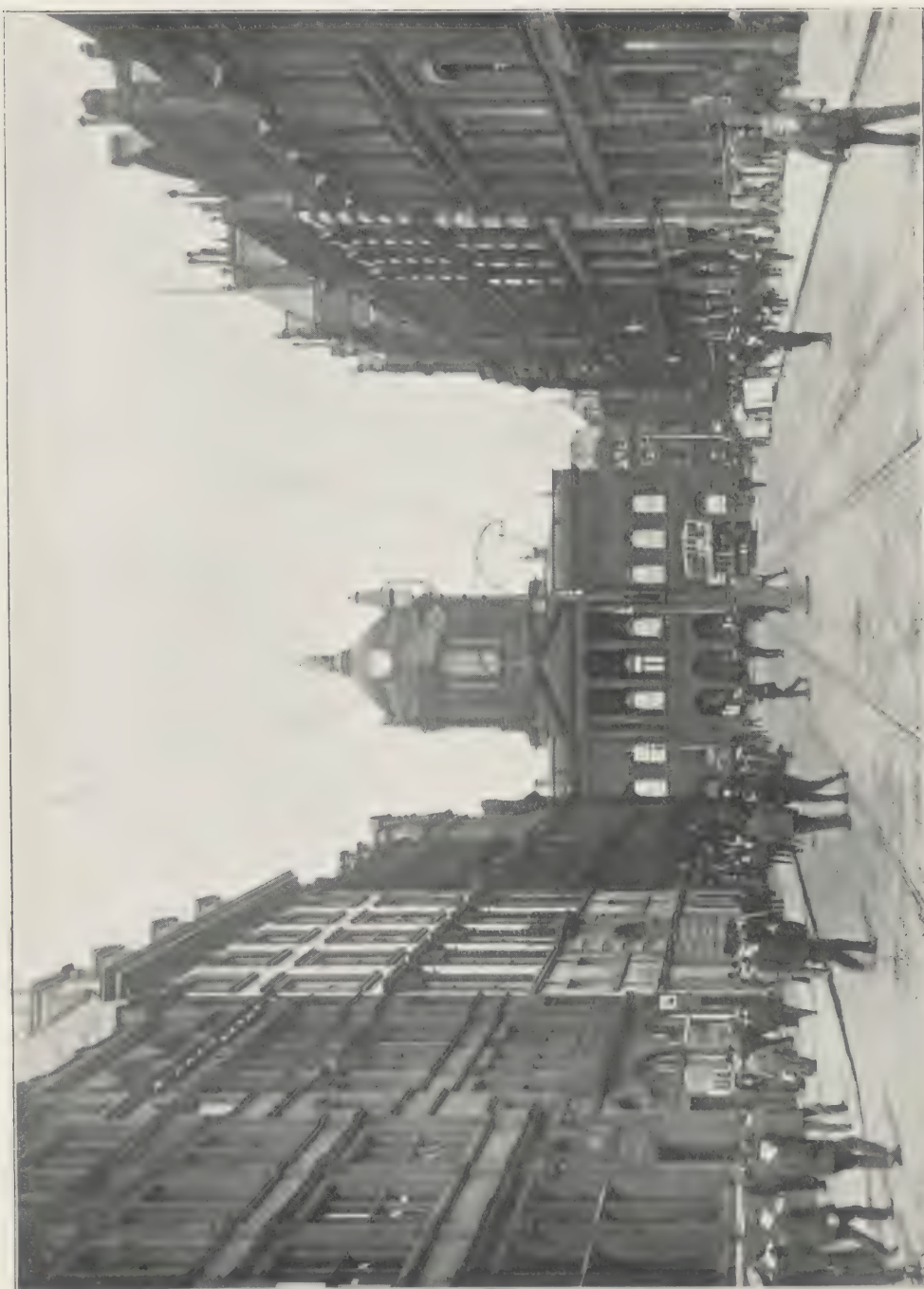
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No. on Plan.	Name of Station.	Name of Railway or Canal Company.
1	Alexandra and Langton Dock	Midland.
2	North Mersey	Lancashire and Yorkshire.
3	Alexandra	London and North Western.
4	Carriers' Dock	Shropshire Union Railways and Canal.
5	Carriers' Dock	Manchester Ship Canal Company, (Bridgewater Canals Undertaking.)
6	Carriers' Dock	Great Western.
7	Bankfield	Lancashire and Yorkshire.
8	Canada Dock	London and North Western.
9	Canada and Alexandra	Great Central.

No. on Plan.	Name of Station.	Name of Railway or Canal Company.
9	Huskinson	Cheshire Lines Committee, consisting of the Great Northern, Great Central and Midland.
10	Sandon	Midland.
11	Collingwood	Shropshire Union Railways and Canal.
12	Stanley Dock	Manchester Ship Canal Company (Bridgewater Canals Undertaking.)
13	Stanley Dock	Great Western.
14	Stanley Dock, via Leeds and Liverpool Canal	Leeds and Liverpool Canal. Depôts: Pall Mall, Bankhall, and Bootle.
15	North Docks (Regent Road)	Lancashire and Yorkshire.
16	Great Howard Street	Lancashire and Yorkshire.

No. on Plan.	Name of Station.	Name of Railway or Canal Company.
15	Waterloo	London and North Western.
16	Canning Dock	Shropshire Union Railways and Canal.
17	Chester Basin	Rochdale Canal Company.
18	Manchester Dock	London and North Western.
19	Manchester Dock	Shropshire Union Railways and Canal.
20	Manchester Dock	Great Western.
21	Duke's Dock	Great Western.
22	Duke's Dock	Manchester Ship Canal Company, (Bridgewater Canals Undertaking.)
23	Wapping	London and North Western.

No. on Plan.	Name of Station.	Name of Railway or Canal Company.
24	Wapping and Salthouse	Lancashire and Yorkshire.
25	South Docks	Great Western.
26	Brunswick	Cheshire Lines Committee, consisting of the Great Northern, Great Central and Midland.
27	Brunswick Station	London and North Western.
28	Texteth South Depôt	London and North Western.
29	Texteth Old Station	Lancashire and Yorkshire.
30	South Docks Station	Lancashire and Yorkshire.
31	Harrington Dock	Shropshire Union Railways and Canal.

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NOTE: The Shipping Berths, having Railway Connections are coloured red. The Railway lines to the Shipping berths and the Main lines of Dock Railway along the East side of the Dock Estate are shown by thick black lines. The Railway Companies Goods Stations, and Depôts and the Canal Carriers Depôts contiguous to the Docks are shown hatched and numbered thus, and coloured green.

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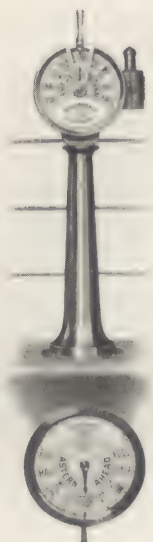
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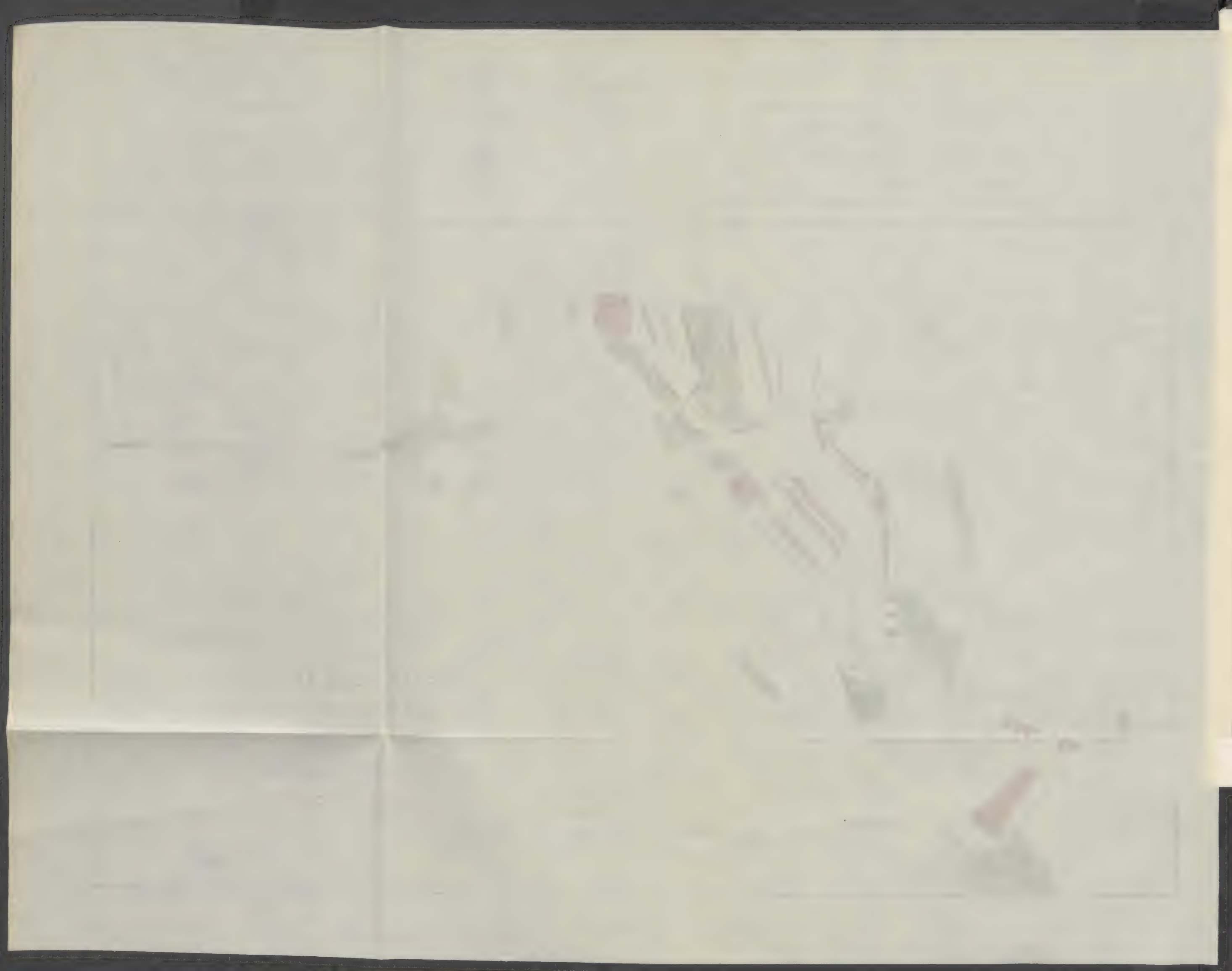
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No. on Plan.	Name of Station.	Name of Railway Company.
1	Shore Road	Cheshire Lines Committee, consisting of the Great Northern, Great Central and Midland.
2	Egerton Dock	London and North Western.
3	Morpeth Dock	Great Western.
4	Canning Street	Great Western.
5	Cathcart Street	London and North Western and Great Western jointly.

No. on Plan.	Name of Station.	Name of Railway Company.
6	Dock Road	Great Central.
7	Cavendish Wharf Coal Sidings.	London and North Western and Great Western jointly.
8	West Float	Cheshire Lines Committee.
9	Birkenhead Docks	Wirral.





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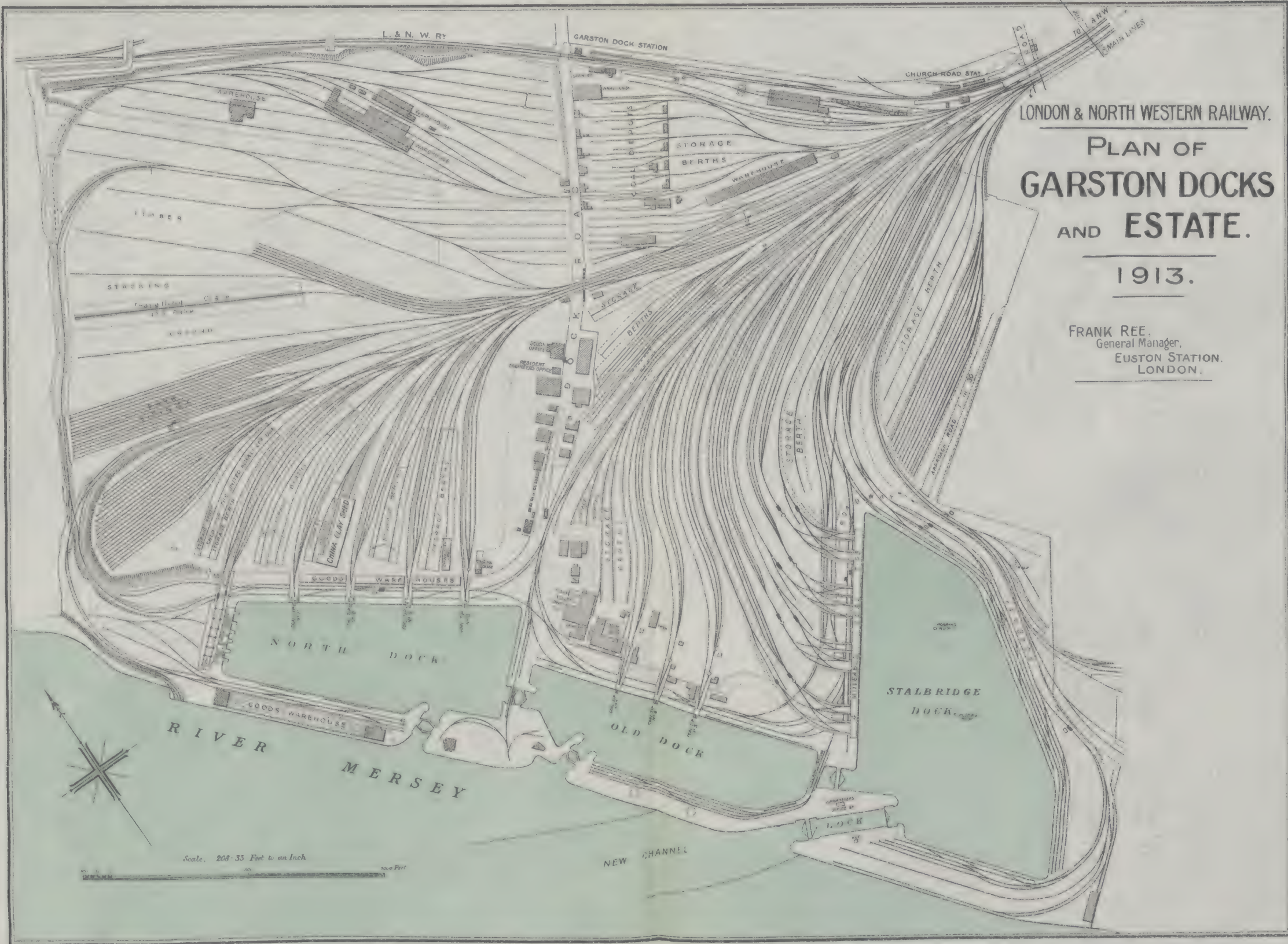
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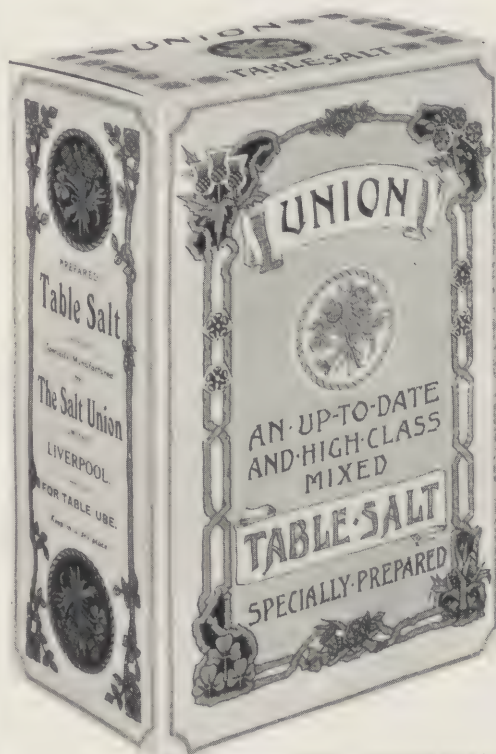
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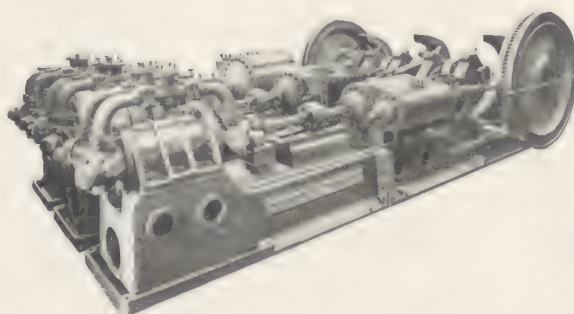
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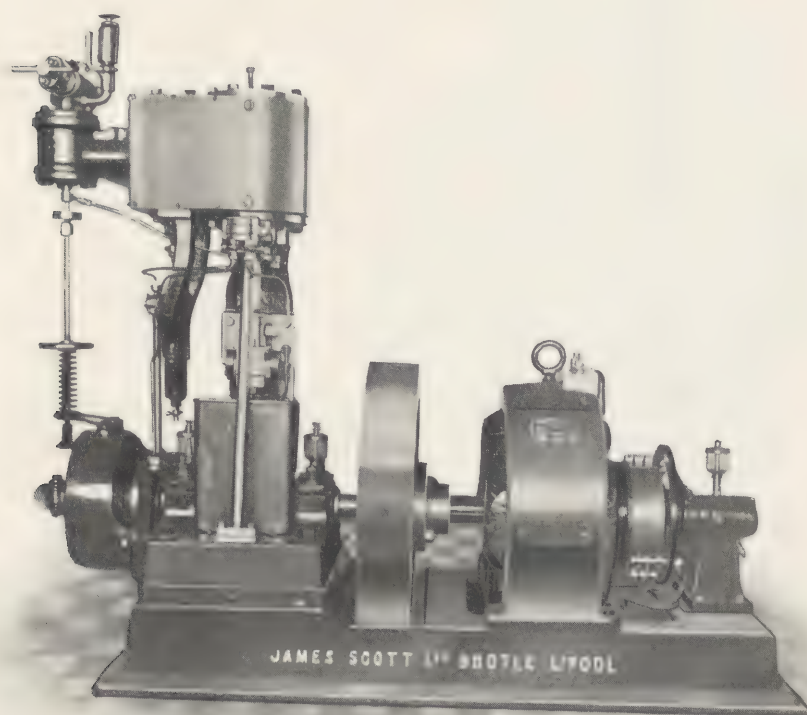
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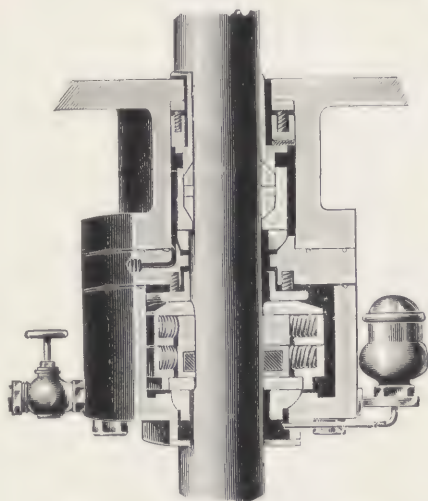
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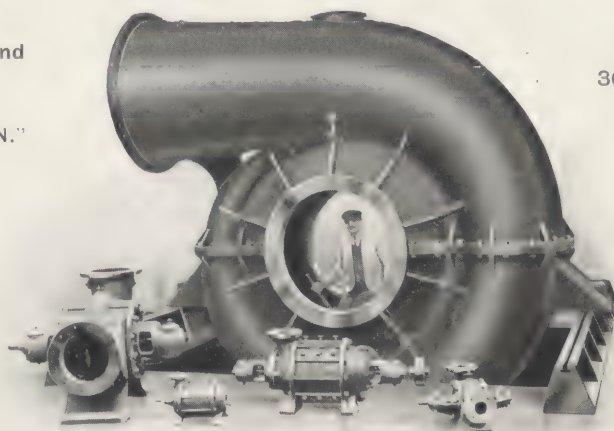
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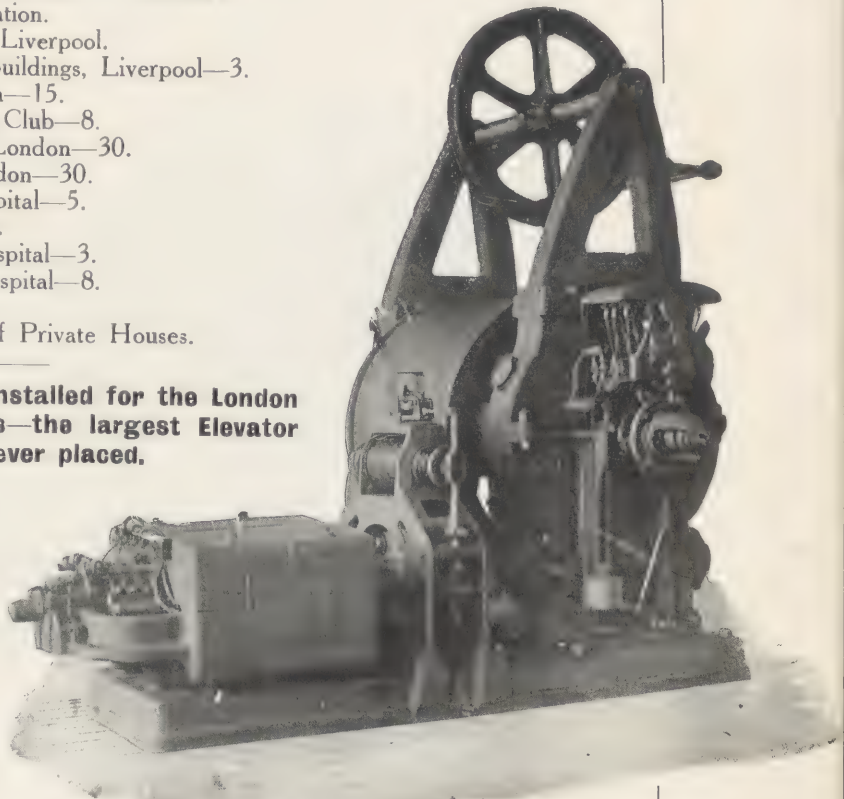
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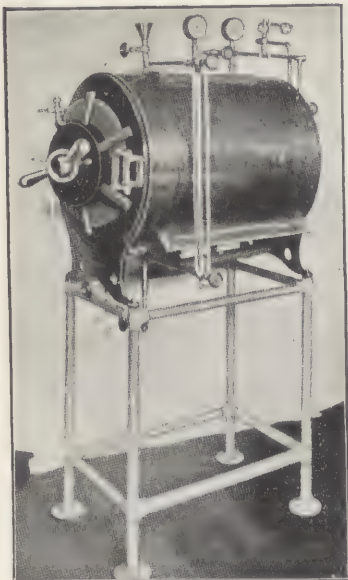


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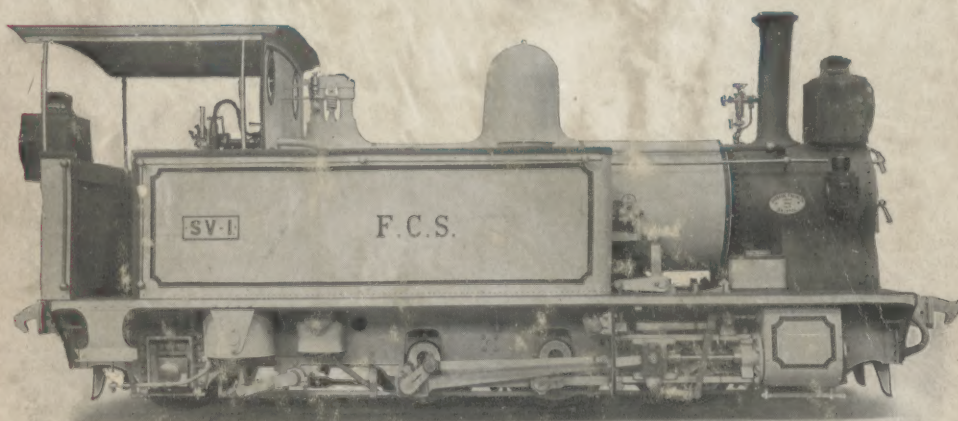
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